

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Avenue, Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy Minerals and Natural Resources

Form C-141  
Revised August 8, 2011

Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Submit 1 Copy to appropriate District Office to  
accordance with 19.15.29 NMAC.

**Release Notification and Corrective Action**

**OPERATOR**

Initial Report  Final Report

Name of Company <b>Burlington Resources Oil &amp; Gas Company</b>	Contact <b>Lisa Hunter</b>
Address <b>3401 East 30<sup>th</sup> St, Farmington, NM</b>	Telephone No. <b>(505) 258-1607</b>
Facility Name: <b>San Juan 28-6 Unit 155N</b>	Facility Type: <b>Gas</b>

Surface Owner: <b>BLM</b>	Mineral Owner: <b>SF-079050-C</b>	API No. <b>3003927601</b>
---------------------------	-----------------------------------	---------------------------

**LOCATION OF RELEASE**

Unit Letter <b>E</b>	Section <b>28</b>	Township <b>28N</b>	Range <b>06W</b>	Feet from the <b>2420'</b>	North/South Line <b>FNL</b>	Feet from the <b>80'</b>	East/West Line <b>FWL</b>	County <b>RIO ARriba</b>	<b>OIL CONS. DIV DIST. 3</b>
-------------------------	----------------------	------------------------	---------------------	-------------------------------	--------------------------------	-----------------------------	------------------------------	-----------------------------	------------------------------

Latitude **36.63311** Longitude **-107.48151**

SEP 22 2016

**NATURE OF RELEASE**

Type of Release <b>Hydrocarbon</b>	Volume of Release <b>186 bbls</b>	Volume Recovered <b>0</b>
Source of Release <b>corroded hole in production tank</b>	Date and Hour of Occurrence <b>Unknown</b>	Date and Hour of Discovery <b>1/27/2015 @ 10:15 AM</b>
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? <b>Shari Ketcham(BLM) and Cory Smith (OCD) on 1/27/2015 @ 3:00pm</b>	
By Whom?	Date and Hour	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

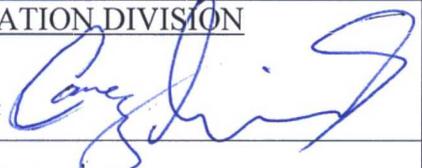
If a Watercourse was Impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action Taken.\* Weld on production tank was found leaking on the 2" plugged coupling located below load line. The drain line to pit was open to drain remaining fluid from tank. Well was shut in.

Describe Area Affected and Cleanup Action Taken.\*

ConocoPhillips excavated an area 64 ft x 71 ft x 19 ft deep terminating at sandstone in January 2015. 2100 cy of impacted soil was removed for offsite disposal. Sidewall and bottom samples were laboratory analyzed for BTEX and TPH on February 17, 2015. Sidewall samples were below NMOCD screening levels (50 ppm BTEX/100ppm TPH), however the bottom sample was in excess of the standards for both BTEX and TPH. On April 30, 2015, a bottom 5-point composite resample was analyzed below the NMOCD standards. February 12, 2016, six discriminate base samples at a 6-8 inch depth were collected from the base per BLM request, with the highest lab results at 350ppm TPH and .31ppm BTEX. Additional site assessment was required by BLM, and in April 2016 six borings were cored into the sandstone from the bottom of the 19 ft deep excavation. The screening levels were achieved for total BTEX (<50 mg/kg) and total TPH (<100 mg/kg) in five of the six borings within 5 to 15 ft (24 to 39 ft below site grade). One boring achieved below standard concentrations at a total depth of 59 ft below site grade (40 ft from bottom of excavation). In May 2016, the excavation was backfilled and additional soil borings were advanced in the southwest corner of the former excavation to delineate lateral extent in the area of the deep core hole. In June 2016, five additional borings were drilled/cored to depths of from 32 to 42.5 feet below site grade. Bottom samples from these borings were laboratory analyzed for BTEX and TPH and all constituents were below NMOCD screening levels. Groundwater is estimated based on local well data to be in excess of 200 ft below site grade. COPC believes remediation has reached the maximum depth and horizontal extent practicable & any residual contaminants do not pose a present or foreseeable threat or an environmental risk to fresh water, humans or animals. No further action is recommended for the site.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: 	<u>OIL CONSERVATION DIVISION</u>	
Printed Name: <b>Lisa Hunter</b>	Approved by Environmental Specialist: 	
Title: <b>Field Environmental Specialist</b>	Approval Date: <b>11/9/17</b>	Expiration Date: <b>—</b>
E-mail Address: <b>Lisa.Hunter@cop.com</b>	Conditions of Approval: <b>No Further Action Req At this Time</b>	Attached <input checked="" type="checkbox"/>
Date: <b>09/13/2016</b>	Phone: <b>(505) 258-1607</b>	

\* Attach Additional Sheets If Necessary **3R-1030**

**See Attached - #NCS 1507249715**

**133**

State of New Mexico  
Energy, Minerals and Natural Resources Department

---

**Susana Martinez**  
Governor

**Ken McQueen**  
Cabinet Secretary

**Matthias Sayer**  
Deputy Cabinet Secretary

**David R. Catanach, Division Director**  
Oil Conservation Division



January 9, 2017

**Re: No Further Action Request**  
**Well: San Juan 28-6 #155N, 30-039-27601, Section 28, Township 28N, Range 6W**

Mr. Crouch,

The Oil Conservation Division (OCD) has reviewed ConocoPhillips (COPC) request for No Further Action at the San Juan 28-6 #155N that was requested on a Final C-141 received September 22, 2016 as well as a copy of a Human and Ecological Risk Assessment received on September 6, 2016.

The OCD has approved COPC request for alternative closure standards and no further action is required.

The acceptance of the "final" C-141 does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to ground water, surface water, human health or the environment. In addition, the OCD acceptance of the final C-141 report does not relieve the operator of responsibility for compliance with any other federal, state or local laws/or regulations.

If you have additional questions, please feel free to call me at 505-334-6178 Ext. 115.

Sincerely,

Cory Smith  
Environmental Specialist  
Energy, Minerals, & Natural Resources Department  
Oil Conservation Division  
1000 Rio Brazos Rd, Aztec, NM 87410  
[cory.smith@state.nm.us](mailto:cory.smith@state.nm.us)

**FIGURE 3**

**FINAL EXCAVATION SAMPLE LOCATIONS AND RESULTS FEBRUARY AND APRIL 2015**  
 ConocoPhillips  
 SAN JUAN 28-6 #155N  
 SW¼, NW¼, SECTION 28, T27N, R6W  
 RIO ARriba COUNTY, NEW MEXICO  
 N36.63291, W107.48120



Animas Environmental Services, LLC

**DRAWN BY:** S. Glasses  
**DATE DRAWN:** February 18, 2015

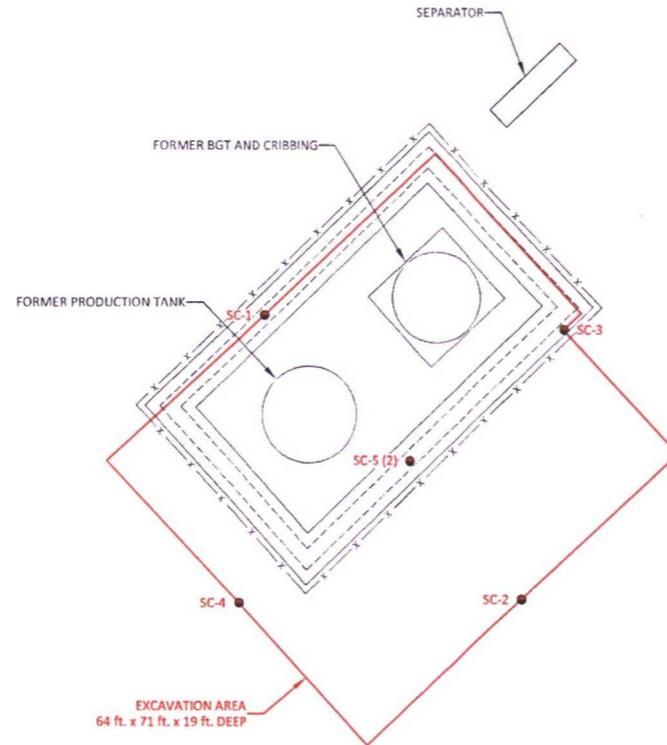
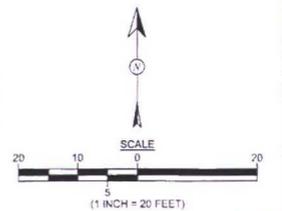
**REVISIONS BY:** C. Lameman  
**DATE REVISED:** May 6, 2015

**CHECKED BY:** E. Skyles  
**DATE CHECKED:** May 6, 2015

**APPROVED BY:** E. McNally  
**DATE APPROVED:** May 6, 2015

**LEGEND**

- SAMPLE LOCATIONS
- ≡≡≡≡ SECONDARY CONTAINMENT BERM
- x-x- FENCE



Field Sampling Results				
Sample ID	Date	Depth (ft)	DVM-PID (ppm)	TPH (mg/kg)
<b>NMOC ACTION LEVEL</b>				
			100	100
SC-1	2/17/15	1 to 19	74.2	<20.0
SC-2	2/17/15	1 to 19	48.0	<20.0
SC-3	2/17/15	1 to 19	20.2	<20.0
SC-4	2/17/15	1 to 19	2.5	<20.0
SC-5 (2)	4/30/15	19	38.5	38.8

ALL SAMPLES ARE COMPOSITE SAMPLES.

Laboratory Analytical Results							
Sample ID	Date	Depth (ft)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH - GRO (mg/kg)	TPH - DRO (mg/kg)	TPH - DRO (mg/kg)
<b>NMOC ACTION LEVEL</b>			10	50		100	
SC-1	2/17/15	1 to 19	<0.032	<0.160	<3.2	<10	<50
SC-2	2/17/15	1 to 19	<0.038	<0.190	<3.8	<10	<50
SC-3	2/17/15	1 to 19	<0.044	<0.220	<4.4	<10	<50
SC-4	2/17/15	1 to 19	<0.031	<0.155	<3.1	<9.9	<50
SC-5 (2)	4/30/15	19	<0.038	<0.190	<3.8	20	<49

ALL SAMPLES WERE ANALYZED PER USEPA METHOD 8021B AND 8015D.



Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: [www.hallenvironmental.com](http://www.hallenvironmental.com)

February 20, 2015

Emilee Skyles  
Animas Environmental  
604 Pinon Street  
Farmington, NM 87401  
TEL: (505) 564-2281  
FAX

RE: COP SJ 28-6 #155N

OrderNo.: 1502720

Dear Emilee Skyles:

Hall Environmental Analysis Laboratory received 5 sample(s) on 2/18/2015 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to [www.hallenvironmental.com](http://www.hallenvironmental.com) or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a white background.

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

# Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1502720

Date Reported: 2/20/2015

CLIENT: Animas Environmental

Client Sample ID: SC-1

Project: COP SJ 28-6 #155N

Collection Date: 2/17/2015 2:10:00 PM

Lab ID: 1502720-001

Matrix: MEOH (SOIL)

Received Date: 2/18/2015 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: <b>JME</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	2/18/2015 10:22:52 AM	17795
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	2/18/2015 10:22:52 AM	17795
Surr: DNOP	99.8	63.5-128		%REC	1	2/18/2015 10:22:52 AM	17795
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	3.2		mg/Kg	1	2/18/2015 10:19:26 AM	R24377
Surr: BFB	99.3	80-120		%REC	1	2/18/2015 10:19:26 AM	R24377
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.032		mg/Kg	1	2/18/2015 10:19:26 AM	R24377
Toluene	ND	0.032		mg/Kg	1	2/18/2015 10:19:26 AM	R24377
Ethylbenzene	ND	0.032		mg/Kg	1	2/18/2015 10:19:26 AM	R24377
Xylenes, Total	ND	0.064		mg/Kg	1	2/18/2015 10:19:26 AM	R24377
Surr: 4-Bromofluorobenzene	100	80-120		%REC	1	2/18/2015 10:19:26 AM	R24377

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:		
*	Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
E	Value above quantitation range	H Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P Sample pH Not In Range
R	RPD outside accepted recovery limits	RL Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits	

# Hall Environmental Analysis Laboratory, Inc.

Analytical Report  
 Lab Order 1502720  
 Date Reported: 2/20/2015

CLIENT: Animas Environmental

Client Sample ID: SC-2

Project: COP SJ 28-6 #155N

Collection Date: 2/17/2015 12:30:00 PM

Lab ID: 1502720-002

Matrix: MEOH (SOIL)

Received Date: 2/18/2015 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: JME
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	2/18/2015 10:49:56 AM	17795
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	2/18/2015 10:49:56 AM	17795
Surr: DNOP	103	63.5-128		%REC	1	2/18/2015 10:49:56 AM	17795
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.8		mg/Kg	1	2/18/2015 10:48:11 AM	R24377
Surr: BFB	94.2	80-120		%REC	1	2/18/2015 10:48:11 AM	R24377
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: NSB
Benzene	ND	0.038		mg/Kg	1	2/18/2015 10:48:11 AM	R24377
Toluene	ND	0.038		mg/Kg	1	2/18/2015 10:48:11 AM	R24377
Ethylbenzene	ND	0.038		mg/Kg	1	2/18/2015 10:48:11 AM	R24377
Xylenes, Total	ND	0.076		mg/Kg	1	2/18/2015 10:48:11 AM	R24377
Surr: 4-Bromofluorobenzene	102	80-120		%REC	1	2/18/2015 10:48:11 AM	R24377

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Client Sample ID: SC-3  
 Project: COP SJ 28-6 #155N Collection Date: 2/17/2015 12:35:00 PM  
 Lab ID: 1502720-003 Matrix: MEOH (SOIL) Received Date: 2/18/2015 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: JME
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	2/18/2015 11:16:47 AM	17795
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	2/18/2015 11:16:47 AM	17795
Surr: DNOP	105	63.5-128		%REC	1	2/18/2015 11:16:47 AM	17795
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.4		mg/Kg	1	2/18/2015 11:16:53 AM	R24377
Surr: BFB	91.9	80-120		%REC	1	2/18/2015 11:16:53 AM	R24377
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: NSB
Benzene	ND	0.044		mg/Kg	1	2/18/2015 11:16:53 AM	R24377
Toluene	ND	0.044		mg/Kg	1	2/18/2015 11:16:53 AM	R24377
Ethylbenzene	ND	0.044		mg/Kg	1	2/18/2015 11:16:53 AM	R24377
Xylenes, Total	ND	0.088		mg/Kg	1	2/18/2015 11:16:53 AM	R24377
Surr: 4-Bromofluorobenzene	99.5	80-120		%REC	1	2/18/2015 11:16:53 AM	R24377

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	
	E Value above quantitation range	H Holding times for preparation or analysis exceeded	
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit	Page 3 of 9
	O RSD is greater than RSDlimit	P Sample pH Not In Range	
	R RPD outside accepted recovery limits	RL Reporting Detection Limit	
	S Spike Recovery outside accepted recovery limits		

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Animas Environmental

Client Sample ID: SC-4

Project: COP SJ 28-6 #155N

Collection Date: 2/17/2015 2:00:00 PM

Lab ID: 1502720-004

Matrix: MEOH (SOIL)

Received Date: 2/18/2015 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: <b>JME</b>
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	2/18/2015 11:43:46 AM	17795
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	2/18/2015 11:43:46 AM	17795
Surr: DNOP	110	63.5-128		%REC	1	2/18/2015 11:43:46 AM	17795
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	3.1		mg/Kg	1	2/18/2015 11:45:37 AM	R24377
Surr: BFB	93.0	80-120		%REC	1	2/18/2015 11:45:37 AM	R24377
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.031		mg/Kg	1	2/18/2015 11:45:37 AM	R24377
Toluene	ND	0.031		mg/Kg	1	2/18/2015 11:45:37 AM	R24377
Ethylbenzene	ND	0.031		mg/Kg	1	2/18/2015 11:45:37 AM	R24377
Xylenes, Total	ND	0.062		mg/Kg	1	2/18/2015 11:45:37 AM	R24377
Surr: 4-Bromofluorobenzene	100	80-120		%REC	1	2/18/2015 11:45:37 AM	R24377

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Animas Environmental Client Sample ID: SC-5  
 Project: COP SJ 28-6 #155N Collection Date: 2/17/2015 12:45:00 PM  
 Lab ID: 1502720-005 Matrix: MEOH (SOIL) Received Date: 2/18/2015 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: JME
Diesel Range Organics (DRO)	640	10		mg/Kg	1	2/18/2015 12:11:05 PM	17795
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	2/18/2015 12:11:05 PM	17795
Surr: DNOP	110	63.5-128		%REC	1	2/18/2015 12:11:05 PM	17795
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: NSB
Gasoline Range Organics (GRO)	3800	390		mg/Kg	100	2/18/2015 12:14:25 PM	R24377
Surr: BFB	163	80-120	S	%REC	100	2/18/2015 12:14:25 PM	R24377
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: NSB
Benzene	7.6	0.39		mg/Kg	10	2/18/2015 9:50:38 AM	R24377
Toluene	130	3.9		mg/Kg	100	2/19/2015 7:28:20 PM	17797
Ethylbenzene	27	0.39		mg/Kg	10	2/18/2015 9:50:38 AM	R24377
Xylenes, Total	270	7.8		mg/Kg	100	2/18/2015 12:14:25 PM	R24377
Surr: 4-Bromofluorobenzene	213	80-120	S	%REC	10	2/18/2015 9:50:38 AM	R24377

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1502720

20-Feb-15

**Client:** Animas Environmental

**Project:** COP SJ 28-6 #155N

Sample ID <b>MB-17795</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015D: Diesel Range Organics</b>							
Client ID: <b>PBS</b>	Batch ID: <b>17795</b>		RunNo: <b>24371</b>							
Prep Date: <b>2/18/2015</b>	Analysis Date: <b>2/18/2015</b>		SeqNo: <b>718279</b>				Units: <b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.7		10.00		97.1	63.5	128			

Sample ID <b>LCS-17795</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015D: Diesel Range Organics</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>17795</b>		RunNo: <b>24371</b>							
Prep Date: <b>2/18/2015</b>	Analysis Date: <b>2/18/2015</b>		SeqNo: <b>718280</b>				Units: <b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	10	50.00	0	96.5	67.8	130			
Surr: DNOP	4.6		5.000		91.0	63.5	128			

Sample ID <b>1502720-001AMS</b>	SampType: <b>MS</b>		TestCode: <b>EPA Method 8015D: Diesel Range Organics</b>							
Client ID: <b>SC-1</b>	Batch ID: <b>17795</b>		RunNo: <b>24371</b>							
Prep Date: <b>2/18/2015</b>	Analysis Date: <b>2/18/2015</b>		SeqNo: <b>718410</b>				Units: <b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	58	9.9	49.70	0	118	29.2	176			
Surr: DNOP	5.5		4.970		110	63.5	128			

Sample ID <b>1502720-001AMSD</b>	SampType: <b>MSD</b>		TestCode: <b>EPA Method 8015D: Diesel Range Organics</b>							
Client ID: <b>SC-1</b>	Batch ID: <b>17795</b>		RunNo: <b>24371</b>							
Prep Date: <b>2/18/2015</b>	Analysis Date: <b>2/18/2015</b>		SeqNo: <b>718411</b>				Units: <b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	58	9.8	49.16	0	118	29.2	176	0.697	23	
Surr: DNOP	5.6		4.916		115	63.5	128	0	0	

**Qualifiers:**

- |   |  |
|---|--|
| * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
| E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
| O RSD is greater than RSDlimit                    | P Sample pH Not In Range                             |
| R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
| S Spike Recovery outside accepted recovery limits |  |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1502720

20-Feb-15

**Client:** Animas Environmental  
**Project:** COP SJ 28-6 #155N

Sample ID <b>5ML RB</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>PBS</b>	Batch ID: <b>R24377</b>	RunNo: <b>24377</b>								
Prep Date:	Analysis Date: <b>2/18/2015</b>	SeqNo: <b>718563</b>			Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	910		1000		91.1	80	120			

Sample ID <b>2.5UG GRO LCS</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>R24377</b>	RunNo: <b>24377</b>								
Prep Date:	Analysis Date: <b>2/18/2015</b>	SeqNo: <b>718564</b>			Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	27	5.0	25.00	0	110	64	130			
Surr: BFB	1000		1000		101	80	120			

Sample ID <b>1502720-001AMS</b>	SampType: <b>MS</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>SC-1</b>	Batch ID: <b>R24377</b>	RunNo: <b>24377</b>								
Prep Date:	Analysis Date: <b>2/18/2015</b>	SeqNo: <b>718567</b>			Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	17	3.2	15.94	2.794	91.5	47.9	144			
Surr: BFB	630		637.8		98.7	80	120			

Sample ID <b>1502720-001AMSD</b>	SampType: <b>MSD</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>SC-1</b>	Batch ID: <b>R24377</b>	RunNo: <b>24377</b>								
Prep Date:	Analysis Date: <b>2/18/2015</b>	SeqNo: <b>718568</b>			Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	17	3.2	15.94	2.794	92.1	47.9	144	0.512	29.9	
Surr: BFB	640		637.8		100	80	120	0	0	

Sample ID <b>MB-17797</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>PBS</b>	Batch ID: <b>17797</b>	RunNo: <b>24415</b>								
Prep Date: <b>2/18/2015</b>	Analysis Date: <b>2/19/2015</b>	SeqNo: <b>719115</b>			Units: <b>%REC</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	890		1000		89.3	80	120			

Sample ID <b>LCS-17797</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>17797</b>	RunNo: <b>24415</b>								
Prep Date: <b>2/18/2015</b>	Analysis Date: <b>2/19/2015</b>	SeqNo: <b>719116</b>			Units: <b>%REC</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1000		1000		102	80	120			

**Qualifiers:**  
 \* Value exceeds Maximum Contaminant Level.  
 E Value above quantitation range  
 J Analyte detected below quantitation limits  
 O RSD is greater than RSDlimit  
 R RPD outside accepted recovery limits  
 S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
 H Holding times for preparation or analysis exceeded  
 ND Not Detected at the Reporting Limit  
 P Sample pH Not In Range  
 RL Reporting Detection Limit

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1502720

20-Feb-15

**Client:** Animas Environmental

**Project:** COP SJ 28-6 #155N

Sample ID	<b>5ML RB</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8021B: Volatiles</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>R24377</b>	RunNo:	<b>24377</b>					
Prep Date:		Analysis Date:	<b>2/18/2015</b>	SeqNo:	<b>718586</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		100	80	120			

Sample ID	<b>100NG BTEX LCS</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8021B: Volatiles</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>R24377</b>	RunNo:	<b>24377</b>					
Prep Date:		Analysis Date:	<b>2/18/2015</b>	SeqNo:	<b>718587</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.2	0.050	1.000	0	116	80	120			
Toluene	1.2	0.050	1.000	0	121	80	120			S
Ethylbenzene	1.2	0.050	1.000	0	116	80	120			
Xylenes, Total	3.4	0.10	3.000	0	114	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		106	80	120			

Sample ID	<b>1502720-002AMS</b>	SampType:	<b>MS</b>	TestCode:	<b>EPA Method 8021B: Volatiles</b>					
Client ID:	<b>SC-2</b>	Batch ID:	<b>R24377</b>	RunNo:	<b>24377</b>					
Prep Date:		Analysis Date:	<b>2/18/2015</b>	SeqNo:	<b>718591</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.90	0.038	0.7599	0.01053	117	69.2	126			
Toluene	0.90	0.038	0.7599	0.03245	114	65.6	128			
Ethylbenzene	0.87	0.038	0.7599	0.009005	114	65.5	138			
Xylenes, Total	2.6	0.076	2.280	0.05980	111	63	139			
Surr: 4-Bromofluorobenzene	0.81		0.7599		107	80	120			

Sample ID	<b>1502720-002AMSD</b>	SampType:	<b>MSD</b>	TestCode:	<b>EPA Method 8021B: Volatiles</b>					
Client ID:	<b>SC-2</b>	Batch ID:	<b>R24377</b>	RunNo:	<b>24377</b>					
Prep Date:		Analysis Date:	<b>2/18/2015</b>	SeqNo:	<b>718592</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.84	0.038	0.7599	0.01053	109	69.2	126	6.99	18.5	
Toluene	0.83	0.038	0.7599	0.03245	105	65.6	128	7.60	20.6	
Ethylbenzene	0.84	0.038	0.7599	0.009005	109	65.5	138	4.37	20.1	
Xylenes, Total	2.5	0.076	2.280	0.05980	106	63	139	4.12	21.1	
Surr: 4-Bromofluorobenzene	0.81		0.7599		107	80	120	0	0	

**Qualifiers:**

- |   |  |
|---|--|
| * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
| E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
| O RSD is greater than RSDlimit                    | P Sample pH Not In Range                             |
| R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
| S Spike Recovery outside accepted recovery limits |  |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1502720  
20-Feb-15

**Client:** Animas Environmental  
**Project:** COP SJ 28-6 #155N

Sample ID <b>MB-17797</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>PBS</b>	Batch ID: <b>17797</b>	RunNo: <b>24415</b>								
Prep Date: <b>2/18/2015</b>	Analysis Date: <b>2/19/2015</b>	SeqNo: <b>719143</b>			Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Toluene	ND	0.050								
Surr: 4-Bromofluorobenzene	0.98		1.000		98.1	80	120			

Sample ID <b>LCS-17797</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>17797</b>	RunNo: <b>24415</b>								
Prep Date: <b>2/18/2015</b>	Analysis Date: <b>2/19/2015</b>	SeqNo: <b>719144</b>			Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Toluene	1.0	0.050	1.000	0	103	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		107	80	120			

**Qualifiers:**

- |   |  |
|---|--|
| * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
| E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
| O RSD is greater than RSDlimit                    | P Sample pH Not In Range                             |
| R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
| S Spike Recovery outside accepted recovery limits |  |



Hall Environmental Analysis Laboratory  
 4901 Hawkins NE  
 Albuquerque, NM 87109  
 TEL: 505-345-3975 FAX: 505-345-4107  
 Website: www.hallenvironmental.com

## Sample Log-In Check List

Client Name: Animas Environmental

Work Order Number: 1502720

RcptNo: 1

Received by/date: LM 02/18/15

Logged By: Ashley Gallegos 2/18/2015 8:00:00 AM AG

Completed By: Ashley Gallegos 2/18/2015 8:17:11 AM AG

Reviewed By: CS 02/18/15

### Chain of Custody

1. Custody seals intact on sample bottles? Yes  No  Not Present
2. Is Chain of Custody complete? Yes  No  Not Present
3. How was the sample delivered? Courier

### Log In

4. Was an attempt made to cool the samples? Yes  No  NA
5. Were all samples received at a temperature of >0° C to 6.0°C Yes  No  NA
6. Sample(s) in proper container(s)? Yes  No
7. Sufficient sample volume for indicated test(s)? Yes  No
8. Are samples (except VOA and ONG) properly preserved? Yes  No
9. Was preservative added to bottles? Yes  No  NA
10. VOA vials have zero headspace? Yes  No  No VOA Vials
11. Were any sample containers received broken? Yes  No
12. Does paperwork match bottle labels?  
(Note discrepancies on chain of custody) Yes  No
13. Are matrices correctly identified on Chain of Custody? Yes  No
14. Is it clear what analyses were requested? Yes  No
15. Were all holding times able to be met?  
(If no, notify customer for authorization.) Yes  No

# of preserved bottles checked for pH: \_\_\_\_\_  
 (<2 or >12 unless noted)  
 Adjusted? \_\_\_\_\_  
 Checked by: \_\_\_\_\_

### Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes  No  NA

Person Notified: \_\_\_\_\_ Date: \_\_\_\_\_  
 By Whom: \_\_\_\_\_ Via:  eMail  Phone  Fax  In Person  
 Regarding: \_\_\_\_\_  
 Client Instructions: \_\_\_\_\_

17. Additional remarks:

### 18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.7	Good	Yes			

# Chain-of-Custody Record

Client: Animas Environmental Services

Mailing Address: 604 W. Pimon  
Farmington, NM 87401

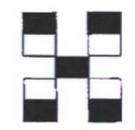
Phone #: (505) 844-2281

email or Fax#: eskyles@animasenvironmental.com

Turn-Around Time:  
 Standard  Rush Same day

Project Name:  
CoP SJ 28-6 # 155 A-N *per 02/18/15*

Project #:  
Per Stephanie Hinds



**HALL ENVIRONMENTAL ANALYSIS LABORATORY**

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

QA/QC Package:  
 Standard  Level 4 (Full Validation)

Accreditation  
 NELAP  Other \_\_\_\_\_

EDD (Type) \_\_\_\_\_

Project Manager:  
E. Skyles

Sampler: S. Hinds

On Ice:  Yes  No

Sample Temperature: 1.7

## Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F, Cl, NO <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub> )	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Air Bubbles (Y or N)
1/17/15	14:10	Soil	SC-1	MedH Kf F-402	MedH cool	1502720 -001	X	X										
1/17/15	12:30	Soil	SC-2	↓	↓	-002	X	X										
1/17/15	12:35	Soil	SC-3	↓	↓	-003	X	X										
2/17/15	14:00	Soil	SC-4	↓	↓	-004	X	X										
2/17/15	12:45	Soil	SC-5	↓	↓	-005	X	X										

Date: 1/17/15 Time: 1644 Relinquished by: Stephanie Hinds

Date: 2/17/15 Time: 1750 Relinquished by: Christi Walz

Received by: Christi Walz Date: 2/17/15 Time: 1644

Received by: [Signature] Date: 02/18/15 Time: 0800

Remarks: Bill to Conoco Phillips.

WO: 20605998 User ID: KGARCIA

Activity Code: D15D Ordered by: Lindsay Dumas

Supervisor: Mike Smith Area: 24

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: [www.hallenvironmental.com](http://www.hallenvironmental.com)

July 14, 2015

Emilee Skyles  
Animas Environmental  
604 Pinon Street  
Farmington, NM 87401  
TEL: (505) 564-2281  
FAX

RE: CoP San Juan 28-6 # 155N

OrderNo.: 1505007

Dear Emilee Skyles:

Hall Environmental Analysis Laboratory received 1 sample(s) on 5/1/2015 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued May 04, 2015.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to [www.hallenvironmental.com](http://www.hallenvironmental.com) or the state specific web sites. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. All samples are reported as received unless otherwise indicated.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a horizontal line.

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

**Analytical Report**

Lab Order 1505007

Date Reported: 7/14/2015

**Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Animas Environmental**Client Sample ID:** SC-5 (2)**Project:** CoP San Juan 28-6 # 155N**Collection Date:** 4/30/2015 9:20:00 AM**Lab ID:** 1505007-001**Matrix:** MEOH (SOIL)**Received Date:** 5/1/2015 5:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>KJH</b>
Diesel Range Organics (DRO)	20	9.9		mg/Kg	1	5/1/2015 10:09:37 AM	19002
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	5/1/2015 10:09:37 AM	19002
Surr: DNOP	85.3	57.9-140		%REC	1	5/1/2015 10:09:37 AM	19002
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	3.8		mg/Kg	1	5/1/2015 10:14:22 AM	R25904
Surr: BFB	95.0	80-120		%REC	1	5/1/2015 10:14:22 AM	R25904
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.038		mg/Kg	1	5/1/2015 10:14:22 AM	R25904
Toluene	ND	0.038		mg/Kg	1	5/1/2015 10:14:22 AM	R25904
Ethylbenzene	ND	0.038		mg/Kg	1	5/1/2015 10:14:22 AM	R25904
Xylenes, Total	ND	0.076		mg/Kg	1	5/1/2015 10:14:22 AM	R25904
Surr: 4-Bromofluorobenzene	105	80-120		%REC	1	5/1/2015 10:14:22 AM	R25904

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1505007

14-Jul-15

**Client:** Animas Environmental  
**Project:** CoP San Juan 28-6 # 155N

Sample ID <b>MB-19002</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>PBS</b>	Batch ID: <b>19002</b>	RunNo: <b>25902</b>								
Prep Date: <b>5/1/2015</b>	Analysis Date: <b>5/1/2015</b>	SeqNo: <b>767806</b>			Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.2		10.00		91.8	57.9	140			

Sample ID <b>LCS-19002</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>19002</b>	RunNo: <b>25902</b>								
Prep Date: <b>5/1/2015</b>	Analysis Date: <b>5/1/2015</b>	SeqNo: <b>767807</b>			Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	10	50.00	0	92.8	67.8	130			
Surr: DNOP	5.2		5.000		105	57.9	140			

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH Not In Range
- RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1505007

14-Jul-15

**Client:** Animas Environmental  
**Project:** CoP San Juan 28-6 # 155N

Sample ID <b>5ML RB</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>PBS</b>	Batch ID: <b>R25904</b>	RunNo: <b>25904</b>								
Prep Date:	Analysis Date: <b>5/1/2015</b>	SeqNo: <b>768086</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	900		1000		90.3	80	120			

Sample ID <b>2.5UG GRO LCS</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>R25904</b>	RunNo: <b>25904</b>								
Prep Date:	Analysis Date: <b>5/1/2015</b>	SeqNo: <b>768087</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	25.00	0	101	64	130			
Surr: BFB	980		1000		98.2	80	120			

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH Not In Range
- RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1505007

14-Jul-15

**Client:** Animas Environmental  
**Project:** CoP San Juan 28-6 # 155N

Sample ID	<b>5ML RB</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8021B: Volatiles</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>R25904</b>	RunNo:	<b>25904</b>					
Prep Date:		Analysis Date:	<b>5/1/2015</b>	SeqNo:	<b>768099</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		103	80	120			

Sample ID	<b>100NG BTEX LCS</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8021B: Volatiles</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>R25904</b>	RunNo:	<b>25904</b>					
Prep Date:		Analysis Date:	<b>5/1/2015</b>	SeqNo:	<b>768100</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.050	1.000	0	107	76.6	128			
Toluene	1.1	0.050	1.000	0	110	75	124			
Ethylbenzene	1.1	0.050	1.000	0	111	79.5	126			
Xylenes, Total	3.3	0.10	3.000	0	109	78.8	124			
Surr: 4-Bromofluorobenzene	1.1		1.000		111	80	120			

Sample ID	<b>1505007-001AMS</b>	SampType:	<b>MS</b>	TestCode:	<b>EPA Method 8021B: Volatiles</b>					
Client ID:	<b>SC-5 (2)</b>	Batch ID:	<b>R25904</b>	RunNo:	<b>25904</b>					
Prep Date:		Analysis Date:	<b>5/1/2015</b>	SeqNo:	<b>768101</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.86	0.038	0.7645	0	113	69.2	126			
Toluene	0.87	0.038	0.7645	0	113	65.6	128			
Ethylbenzene	0.88	0.038	0.7645	0.006215	114	65.5	138			
Xylenes, Total	2.6	0.076	2.294	0	114	63	139			
Surr: 4-Bromofluorobenzene	0.86		0.7645		113	80	120			

Sample ID	<b>1505007-001AMSD</b>	SampType:	<b>MSD</b>	TestCode:	<b>EPA Method 8021B: Volatiles</b>					
Client ID:	<b>SC-5 (2)</b>	Batch ID:	<b>R25904</b>	RunNo:	<b>25904</b>					
Prep Date:		Analysis Date:	<b>5/1/2015</b>	SeqNo:	<b>768103</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.83	0.038	0.7645	0	109	69.2	126	3.91	18.5	
Toluene	0.83	0.038	0.7645	0	108	65.6	128	4.33	20.6	
Ethylbenzene	0.85	0.038	0.7645	0.006215	111	65.5	138	2.55	20.1	
Xylenes, Total	2.5	0.076	2.294	0	111	63	139	2.95	21.1	
Surr: 4-Bromofluorobenzene	0.83		0.7645		109	80	120	0	0	

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH Not In Range
- RL Reporting Detection Limit



Hall Environmental Analysis Laboratory  
 4901 Hawkins NE  
 Albuquerque, NM 87109  
 TEL: 505-345-3975 FAX: 505-345-4107  
 Website: www.hallenvironmental.com

# Sample Log-In Check List

Client Name: Animas Environmental

Work Order Number: 1505007

RcptNo: 1

Received by/date:

*[Signature]*

05/01/15

Logged By: Lindsay Mangin

5/1/2015 5:50:00 AM

*[Signature]*

Completed By: Lindsay Mangin

5/1/2015 7:19:02 AM

*[Signature]*

Reviewed By:

AT 05/01/15

### Chain of Custody

- 1. Custody seals intact on sample bottles? Yes  No  Not Present
- 2. Is Chain of Custody complete? Yes  No  Not Present
- 3. How was the sample delivered? Courier

### Log In

- 4. Was an attempt made to cool the samples? Yes  No  NA
- 5. Were all samples received at a temperature of >0° C to 6.0°C Yes  No  NA
- 6. Sample(s) in proper container(s)? Yes  No
- 7. Sufficient sample volume for indicated test(s)? Yes  No
- 8. Are samples (except VOA and ONG) properly preserved? Yes  No
- 9. Was preservative added to bottles? Yes  No  NA
- 10. VOA vials have zero headspace? Yes  No  No VOA Vials
- 11. Were any sample containers received broken? Yes  No
- 12. Does paperwork match bottle labels?  
(Note discrepancies on chain of custody) Yes  No
- 13. Are matrices correctly identified on Chain of Custody? Yes  No
- 14. Is it clear what analyses were requested? Yes  No
- 15. Were all holding times able to be met?  
(If no, notify customer for authorization.) Yes  No

# of preserved bottles checked for pH: \_\_\_\_\_  
 (<2 or >12 unless noted)  
 Adjusted? \_\_\_\_\_  
 Checked by: \_\_\_\_\_

### Special Handling (if applicable)

- 16. Was client notified of all discrepancies with this order? Yes  No  NA

Person Notified: \_\_\_\_\_ Date: \_\_\_\_\_  
 By Whom: \_\_\_\_\_ Via:  eMail  Phone  Fax  In Person  
 Regarding: \_\_\_\_\_  
 Client Instructions: \_\_\_\_\_

17. Additional remarks:

### 18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.1	Good	Yes			

# Chain-of-Custody Record

Client: Animas Environmental Services

Mailing Address: 604 V. Pimon St.  
Farmington NM 87401

Phone #: 505-564-2281

email or Fax#: eskyles@animasenvironmental.com

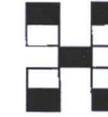
QA/QC Package:  
 Standard  Level 4 (Full Validation)

Accreditation  
 NELAP  Other \_\_\_\_\_  
 EDD (Type) \_\_\_\_\_

Turn-Around Time:  
 Standard  Rush Same Day

Project Name:  
CoP San Juan 28-6 # 155N

Project #:



## HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com  
4901 Hawkins NE - Albuquerque, NM 87109  
Tel. 505-345-3975 Fax 505-345-4107

### Analysis Request

Project Manager:  
E. Skyles

Sampler:  
C. Lameman

On Ice:  Yes  No

Sample Temperature: 3.1

BTEX + MTBE + TAMEB (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F, Cl, NO <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub> )	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Air Bubbles (Y or N)
X	X										

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.
4-30-15	0920	Soil	SC-5	05/10/15 Mech Kit 2-4oz jar	Cool	1505007 -001

Date: <u>4/30/15</u>	Time: <u>1722</u>	Relinquished by: <u>[Signature]</u>	Received by: <u>Christie Walte</u>	Date: <u>4/30/15</u>	Time: <u>1722</u>
Date: <u>4/30/15</u>	Time: <u>1819</u>	Relinquished by: <u>[Signature]</u>	Received by: <u>[Signature]</u>	Date: <u>05/01/15</u>	Time: <u>0550</u>

Remarks: Bill to ConocoPhillips

WO#: 20605998 Area: 24

Supervisor: Mike Smith Act. Code: D150

User: KGARCIA Ordered by: Lindsay Dumas

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: [www.hallenvironmental.com](http://www.hallenvironmental.com)

February 18, 2016

Emilee Skyles  
Animas Environmental  
604 Pinon Street  
Farmington, NM 87401  
TEL: (505) 564-2281  
FAX

RE: CoP SJ 28-6 #155N

OrderNo.: 1602592

Dear Emilee Skyles:

Hall Environmental Analysis Laboratory received 6 sample(s) on 2/13/2016 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to [www.hallenvironmental.com](http://www.hallenvironmental.com) or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a light blue horizontal line.

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Animas Environmental

**Client Sample ID:** S-1

**Project:** CoP SJ 28-6 #155N

**Collection Date:** 2/12/2016 9:15:00 AM

**Lab ID:** 1602592-001

**Matrix:** SOIL

**Received Date:** 2/13/2016 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>KJH</b>
Diesel Range Organics (DRO)	19	9.5		mg/Kg	1	2/17/2016 1:46:27 AM	23739
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	2/17/2016 1:46:27 AM	23739
Surr: DNOP	73.7	70-130		%Rec	1	2/17/2016 1:46:27 AM	23739
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	27	4.6		mg/Kg	1	2/17/2016 12:28:37 AM	23727
Surr: BFB	206	66.2-112	S	%Rec	1	2/17/2016 12:28:37 AM	23727
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.046		mg/Kg	1	2/17/2016 12:28:37 AM	23727
Toluene	0.17	0.046		mg/Kg	1	2/17/2016 12:28:37 AM	23727
Ethylbenzene	ND	0.046		mg/Kg	1	2/17/2016 12:28:37 AM	23727
Xylenes, Total	1.5	0.093		mg/Kg	1	2/17/2016 12:28:37 AM	23727
Surr: 4-Bromofluorobenzene	120	80-120	S	%Rec	1	2/17/2016 12:28:37 AM	23727

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

**Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Animas Environmental**Client Sample ID:** S-2**Project:** CoP SJ 28-6 #155N**Collection Date:** 2/12/2016 9:25:00 AM**Lab ID:** 1602592-002**Matrix:** SOIL**Received Date:** 2/13/2016 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>KJH</b>
Diesel Range Organics (DRO)	130	9.4		mg/Kg	1	2/17/2016 2:07:39 AM	23739
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	2/17/2016 2:07:39 AM	23739
Surr: DNOP	72.7	70-130		%Rec	1	2/17/2016 2:07:39 AM	23739
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	220	48		mg/Kg	10	2/16/2016 12:58:56 PM	23727
Surr: BFB	166	66.2-112	S	%Rec	10	2/16/2016 12:58:56 PM	23727
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.24		mg/Kg	10	2/16/2016 12:58:56 PM	23727
Toluene	2.3	0.48		mg/Kg	10	2/16/2016 12:58:56 PM	23727
Ethylbenzene	1.2	0.48		mg/Kg	10	2/16/2016 12:58:56 PM	23727
Xylenes, Total	18	0.96		mg/Kg	10	2/16/2016 12:58:56 PM	23727
Surr: 4-Bromofluorobenzene	140	80-120	S	%Rec	10	2/16/2016 12:58:56 PM	23727

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental

Client Sample ID: S-3

Project: CoP SJ 28-6 #155N

Collection Date: 2/12/2016 9:35:00 AM

Lab ID: 1602592-003

Matrix: SOIL

Received Date: 2/13/2016 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>KJH</b>
Diesel Range Organics (DRO)	19	9.1		mg/Kg	1	2/17/2016 2:28:39 AM	23739
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	2/17/2016 2:28:39 AM	23739
Surr: DNOP	74.9	70-130		%Rec	1	2/17/2016 2:28:39 AM	23739
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	40	4.6		mg/Kg	1	2/17/2016 2:02:17 AM	23727
Surr: BFB	267	66.2-112	S	%Rec	1	2/17/2016 2:02:17 AM	23727
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.046		mg/Kg	1	2/17/2016 2:02:17 AM	23727
Toluene	ND	0.046		mg/Kg	1	2/17/2016 2:02:17 AM	23727
Ethylbenzene	ND	0.046		mg/Kg	1	2/17/2016 2:02:17 AM	23727
Xylenes, Total	0.31	0.093		mg/Kg	1	2/17/2016 2:02:17 AM	23727
Surr: 4-Bromofluorobenzene	122	80-120	S	%Rec	1	2/17/2016 2:02:17 AM	23727

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:		
*	Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E Value above quantitation range
H	Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P Sample pH Not In Range
R	RPD outside accepted recovery limits	RL Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Animas Environmental

Client Sample ID: S-4

Project: CoP SJ 28-6 #155N

Collection Date: 2/12/2016 9:45:00 AM

Lab ID: 1602592-004

Matrix: SOIL

Received Date: 2/13/2016 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>KJH</b>
Diesel Range Organics (DRO)	59	9.6		mg/Kg	1	2/17/2016 2:49:48 AM	23739
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	2/17/2016 2:49:48 AM	23739
Surr: DNOP	74.4	70-130		%Rec	1	2/17/2016 2:49:48 AM	23739
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	91	24		mg/Kg	5	2/16/2016 1:23:49 PM	23727
Surr: BFB	160	66.2-112	S	%Rec	5	2/16/2016 1:23:49 PM	23727
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.12		mg/Kg	5	2/16/2016 1:23:49 PM	23727
Toluene	0.50	0.24		mg/Kg	5	2/16/2016 1:23:49 PM	23727
Ethylbenzene	0.39	0.24		mg/Kg	5	2/16/2016 1:23:49 PM	23727
Xylenes, Total	4.9	0.49		mg/Kg	5	2/16/2016 1:23:49 PM	23727
Surr: 4-Bromofluorobenzene	138	80-120	S	%Rec	5	2/16/2016 1:23:49 PM	23727

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Animas Environmental

**Client Sample ID:** S-5

**Project:** CoP SJ 28-6 #155N

**Collection Date:** 2/12/2016 9:55:00 AM

**Lab ID:** 1602592-005

**Matrix:** SOIL

**Received Date:** 2/13/2016 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>KJH</b>
Diesel Range Organics (DRO)	36	10		mg/Kg	1	2/17/2016 3:10:49 AM	23739
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	2/17/2016 3:10:49 AM	23739
Surr: DNOP	73.7	70-130		%Rec	1	2/17/2016 3:10:49 AM	23739
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	150	4.8		mg/Kg	1	2/17/2016 2:25:48 AM	23727
Surr: BFB	223	66.2-112	S	%Rec	1	2/17/2016 2:25:48 AM	23727
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.048		mg/Kg	1	2/17/2016 2:25:48 AM	23727
Toluene	0.16	0.048		mg/Kg	1	2/17/2016 2:25:48 AM	23727
Ethylbenzene	ND	0.048		mg/Kg	1	2/17/2016 2:25:48 AM	23727
Xylenes, Total	5.1	0.096		mg/Kg	1	2/17/2016 2:25:48 AM	23727
Surr: 4-Bromofluorobenzene	145	80-120	S	%Rec	1	2/17/2016 2:25:48 AM	23727

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Animas Environmental

Client Sample ID: S-6

Project: CoP SJ 28-6 #155N

Collection Date: 2/12/2016 10:05:00 AM

Lab ID: 1602592-006

Matrix: SOIL

Received Date: 2/13/2016 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>KJH</b>
Diesel Range Organics (DRO)	66	9.6		mg/Kg	1	2/17/2016 3:31:55 AM	23739
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	2/17/2016 3:31:55 AM	23739
Surr: DNOP	75.1	70-130		%Rec	1	2/17/2016 3:31:55 AM	23739
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	240	9.5		mg/Kg	2	2/16/2016 1:48:30 PM	23727
Surr: BFB	424	66.2-112	S	%Rec	2	2/16/2016 1:48:30 PM	23727
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.095		mg/Kg	2	2/16/2016 1:48:30 PM	23727
Toluene	1.6	0.095		mg/Kg	2	2/16/2016 1:48:30 PM	23727
Ethylbenzene	0.89	0.095		mg/Kg	2	2/16/2016 1:48:30 PM	23727
Xylenes, Total	11	0.19		mg/Kg	2	2/16/2016 1:48:30 PM	23727
Surr: 4-Bromofluorobenzene	164	80-120	S	%Rec	2	2/16/2016 1:48:30 PM	23727

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1602592

18-Feb-16

**Client:** Animas Environmental

**Project:** CoP SJ 28-6 #155N

Sample ID	<b>MB-23739</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8015M/D: Diesel Range Organics</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>23739</b>	RunNo:	<b>32179</b>					
Prep Date:	<b>2/15/2016</b>	Analysis Date:	<b>2/16/2016</b>	SeqNo:	<b>983682</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.7		10.00		87.1	70	130			

Sample ID	<b>LCS-23739</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8015M/D: Diesel Range Organics</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>23739</b>	RunNo:	<b>32179</b>					
Prep Date:	<b>2/15/2016</b>	Analysis Date:	<b>2/16/2016</b>	SeqNo:	<b>983684</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	10	50.00	0	95.3	65.8	136			
Surr: DNOP	4.9		5.000		97.5	70	130			

Sample ID	<b>MB-23771</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8015M/D: Diesel Range Organics</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>23771</b>	RunNo:	<b>32179</b>					
Prep Date:	<b>2/17/2016</b>	Analysis Date:	<b>2/17/2016</b>	SeqNo:	<b>984150</b>	Units:	<b>%Rec</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	7.3		10.00		73.4	70	130			

Sample ID	<b>LCS-23771</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8015M/D: Diesel Range Organics</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>23771</b>	RunNo:	<b>32179</b>					
Prep Date:	<b>2/17/2016</b>	Analysis Date:	<b>2/17/2016</b>	SeqNo:	<b>984152</b>	Units:	<b>%Rec</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	3.7		5.000		73.3	70	130			

Sample ID	<b>MB-23740</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8015M/D: Diesel Range Organics</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>23740</b>	RunNo:	<b>32199</b>					
Prep Date:	<b>2/15/2016</b>	Analysis Date:	<b>2/17/2016</b>	SeqNo:	<b>984257</b>	Units:	<b>%Rec</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.7		10.00		96.8	70	130			

Sample ID	<b>LCS-23740</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8015M/D: Diesel Range Organics</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>23740</b>	RunNo:	<b>32199</b>					
Prep Date:	<b>2/15/2016</b>	Analysis Date:	<b>2/17/2016</b>	SeqNo:	<b>984258</b>	Units:	<b>%Rec</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.3		5.000		85.9	70	130			

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1602592

18-Feb-16

**Client:** Animas Environmental  
**Project:** CoP SJ 28-6 #155N

Sample ID	<b>MB-23733</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8015D: Gasoline Range</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>23733</b>	RunNo:	<b>32174</b>					
Prep Date:	<b>2/15/2016</b>	Analysis Date:	<b>2/16/2016</b>	SeqNo:	<b>983808</b>	Units:	<b>%Rec</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	950		1000		94.5	66.2	112			

Sample ID	<b>LCS-23733</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8015D: Gasoline Range</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>23733</b>	RunNo:	<b>32174</b>					
Prep Date:	<b>2/15/2016</b>	Analysis Date:	<b>2/16/2016</b>	SeqNo:	<b>983809</b>	Units:	<b>%Rec</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	990		1000		99.5	66.2	112			

Sample ID	<b>MB-23727</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8015D: Gasoline Range</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>23727</b>	RunNo:	<b>32174</b>					
Prep Date:	<b>2/15/2016</b>	Analysis Date:	<b>2/16/2016</b>	SeqNo:	<b>983818</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	920		1000		91.5	66.2	112			

Sample ID	<b>LCS-23727</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8015D: Gasoline Range</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>23727</b>	RunNo:	<b>32174</b>					
Prep Date:	<b>2/15/2016</b>	Analysis Date:	<b>2/16/2016</b>	SeqNo:	<b>983819</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	94.4	79.6	122			
Surr: BFB	1000		1000		101	66.2	112			

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1602592

18-Feb-16

**Client:** Animas Environmental

**Project:** CoP SJ 28-6 #155N

Sample ID <b>MB-23733</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>PBS</b>	Batch ID: <b>23733</b>	RunNo: <b>32174</b>								
Prep Date: <b>2/15/2016</b>	Analysis Date: <b>2/16/2016</b>	SeqNo: <b>983840</b> Units: <b>%Rec</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.1		1.000		115	80	120			

Sample ID <b>LCS-23733</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>23733</b>	RunNo: <b>32174</b>								
Prep Date: <b>2/15/2016</b>	Analysis Date: <b>2/16/2016</b>	SeqNo: <b>983841</b> Units: <b>%Rec</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.1		1.000		109	80	120			

Sample ID <b>MB-23727</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>PBS</b>	Batch ID: <b>23727</b>	RunNo: <b>32174</b>								
Prep Date: <b>2/15/2016</b>	Analysis Date: <b>2/16/2016</b>	SeqNo: <b>983846</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.1		1.000		111	80	120			

Sample ID <b>LCS-23727</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>23727</b>	RunNo: <b>32174</b>								
Prep Date: <b>2/15/2016</b>	Analysis Date: <b>2/16/2016</b>	SeqNo: <b>983847</b> Units: <b>mg/Kg</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.050	1.000	0	103	80	120			
Toluene	1.1	0.050	1.000	0	114	80	120			
Ethylbenzene	1.2	0.050	1.000	0	118	80	120			
Xylenes, Total	3.5	0.10	3.000	0	117	80	120			
Surr: 4-Bromofluorobenzene	1.2		1.000		118	80	120			

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified



Hall Environmental Analysis Laboratory  
 4901 Hawkins NE  
 Albuquerque, NM 87109  
 TEL: 505-345-3975 FAX: 505-345-4107  
 Website: www.hallenvironmental.com

# Sample Log-In Check List

Client Name: Animas Environmental

Work Order Number: 1602592

RcptNo: 1

Received by/date

*R-177*

*02/13/16*

Logged By: Ashley Gallegos

2/13/2016 9:00:00 AM

*AG*

Completed By: Ashley Gallegos

2/15/2016 11:13:08 AM

*AG*

Reviewed By:

*ga*

*02/15/16*

**Chain of Custody**

- 1. Custody seals intact on sample bottles? Yes  No  Not Present
- 2. Is Chain of Custody complete? Yes  No  Not Present
- 3. How was the sample delivered? Courier

**Log In**

- 4. Was an attempt made to cool the samples? Yes  No  NA
- 5. Were all samples received at a temperature of >0° C to 6.0°C Yes  No  NA
- 6. Sample(s) in proper container(s)? Yes  No
- 7. Sufficient sample volume for indicated test(s)? Yes  No
- 8. Are samples (except VOA and ONG) properly preserved? Yes  No
- 9. Was preservative added to bottles? Yes  No  NA
- 10. VOA vials have zero headspace? Yes  No  No VOA Vials
- 11. Were any sample containers received broken? Yes  No
- 12. Does paperwork match bottle labels? Yes  No   
(Note discrepancies on chain of custody)
- 13. Are matrices correctly identified on Chain of Custody? Yes  No
- 14. Is it clear what analyses were requested? Yes  No
- 15. Were all holding times able to be met? Yes  No   
(If no, notify customer for authorization.)

# of preserved bottles checked for pH  
 (<2 or >12 unless noted)  
 Adjusted? \_\_\_\_\_  
 Checked by: \_\_\_\_\_

**Special Handling (if applicable)**

- 16. Was client notified of all discrepancies with this order? Yes  No  NA

Person Notified: \_\_\_\_\_ Date: \_\_\_\_\_  
 By Whom: \_\_\_\_\_ Via:  eMail  Phone  Fax  In Person  
 Regarding: \_\_\_\_\_  
 Client Instructions: \_\_\_\_\_

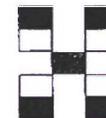
17. Additional remarks:

**18. Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.6	Good	Yes			

# Chain-of-Custody Record

Turn-Around Time:



## HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Client: Annas Environmental Services

Mailing Address: 604 W. Pecos St  
Farmington, NM 87401

Phone #: 505-564-2281

Email or Fax#: ESkyles@annasenvironmental.com

QA/QC Package:  
 Standard  Level 4 (Full Validation)

Accreditation:  
 NELAP  Other \_\_\_\_\_

EDD (Type) \_\_\_\_\_

Standard  Rush

Project Name: COP SJ 28-6 #155 N

Project #: \_\_\_\_\_

Project Manager: Emilee Skyles

Sampler: SM

On Ice:  Yes  No

Sample Temperature: 1.6

### Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F, Cl, NO <sub>3</sub> , PO <sub>4</sub> , SO <sub>4</sub> )	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Air Bubbles (Y or N)
1/16	9:15	Soil	S-1	1-4oz	cool	11002592-001	X	X										
2/16	9:25	Soil	S-2	1-4oz	cool	-002	X	X										
2/16	9:35	soil	S-3	1-4oz	cool	-003	X	X										
12/16	9:45	soil	S-4	1-4oz	cool	-004	X	X										
12/16	9:55	Soil	S-5	1-4oz	cool	-005	X	X										
12/16	10:05	soil	S-6	1-4oz	cool	-006	X	X										

Date:	Time:	Relinquished by:	Received by:	Date:	Time:	Remarks:
1/16	11:05	<u>Stephen F. Lewis</u>	<u>Christine Walters</u>	2/12/16	11:05	Bill to ConocoPhillips
Date:	Time:	Relinquished by:	Received by:	Date:	Time:	Remarks:
12/16	11:46	<u>Christine Walters</u>	<u>[Signature]</u>	02/13/15	09:00	wo:20005498 Activity Code: D15D Supervisor: Mike Smith

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: [www.hallenvironmental.com](http://www.hallenvironmental.com)

July 14, 2015

Emilee Skyles  
Animas Environmental  
604 Pinon Street  
Farmington, NM 87401  
TEL: (505) 564-2281  
FAX

RE: CoP San Juan 28-6 # 155N

OrderNo.: 1505007

Dear Emilee Skyles:

Hall Environmental Analysis Laboratory received 1 sample(s) on 5/1/2015 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued May 04, 2015.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to [www.hallenvironmental.com](http://www.hallenvironmental.com) or the state specific web sites. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. All samples are reported as received unless otherwise indicated.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a light blue horizontal line.

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Animas Environmental

Client Sample ID: SC-5 (2)

Project: CoP San Juan 28-6 # 155N

Collection Date: 4/30/2015 9:20:00 AM

Lab ID: 1505007-001

Matrix: MEOH (SOIL)

Received Date: 5/1/2015 5:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>KJH</b>
Diesel Range Organics (DRO)	20	9.9		mg/Kg	1	5/1/2015 10:09:37 AM	19002
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	5/1/2015 10:09:37 AM	19002
Surr: DNOP	85.3	57.9-140		%REC	1	5/1/2015 10:09:37 AM	19002
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	3.8		mg/Kg	1	5/1/2015 10:14:22 AM	R25904
Surr: BFB	95.0	80-120		%REC	1	5/1/2015 10:14:22 AM	R25904
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.038		mg/Kg	1	5/1/2015 10:14:22 AM	R25904
Toluene	ND	0.038		mg/Kg	1	5/1/2015 10:14:22 AM	R25904
Ethylbenzene	ND	0.038		mg/Kg	1	5/1/2015 10:14:22 AM	R25904
Xylenes, Total	ND	0.076		mg/Kg	1	5/1/2015 10:14:22 AM	R25904
Surr: 4-Bromofluorobenzene	105	80-120		%REC	1	5/1/2015 10:14:22 AM	R25904

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1505007

14-Jul-15

**Client:** Animas Environmental  
**Project:** CoP San Juan 28-6 # 155N

Sample ID <b>MB-19002</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>PBS</b>	Batch ID: <b>19002</b>	RunNo: <b>25902</b>								
Prep Date: <b>5/1/2015</b>	Analysis Date: <b>5/1/2015</b>	SeqNo: <b>767806</b>			Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.2		10.00		91.8	57.9	140			

Sample ID <b>LCS-19002</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>19002</b>	RunNo: <b>25902</b>								
Prep Date: <b>5/1/2015</b>	Analysis Date: <b>5/1/2015</b>	SeqNo: <b>767807</b>			Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	10	50.00	0	92.8	67.8	130			
Surr: DNOP	5.2		5.000		105	57.9	140			

### Qualifiers:

- |   |  |
|---|--|
| * Value exceeds Maximum Contaminant Level.        | B Analyte detected in the associated Method Blank    |
| E Value above quantitation range                  | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits      | ND Not Detected at the Reporting Limit               |
| O RSD is greater than RSDlimit                    | P Sample pH Not In Range                             |
| R RPD outside accepted recovery limits            | RL Reporting Detection Limit                         |
| S Spike Recovery outside accepted recovery limits |  |

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1505007

14-Jul-15

**Client:** Animas Environmental  
**Project:** CoP San Juan 28-6 # 155N

Sample ID <b>5ML RB</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>PBS</b>	Batch ID: <b>R25904</b>	RunNo: <b>25904</b>								
Prep Date:	Analysis Date: <b>5/1/2015</b>	SeqNo: <b>768086</b>			Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	900		1000		90.3	80	120			

Sample ID <b>2.5UG GRO LCS</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>R25904</b>	RunNo: <b>25904</b>								
Prep Date:	Analysis Date: <b>5/1/2015</b>	SeqNo: <b>768087</b>			Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	25.00	0	101	64	130			
Surr: BFB	980		1000		98.2	80	120			

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH Not In Range
- RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1505007  
14-Jul-15

**Client:** Animas Environmental  
**Project:** CoP San Juan 28-6 # 155N

Sample ID	<b>5ML RB</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8021B: Volatiles</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>R25904</b>	RunNo:	<b>25904</b>					
Prep Date:		Analysis Date:	<b>5/1/2015</b>	SeqNo:	<b>768099</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		103	80	120			

Sample ID	<b>100NG BTEX LCS</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8021B: Volatiles</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>R25904</b>	RunNo:	<b>25904</b>					
Prep Date:		Analysis Date:	<b>5/1/2015</b>	SeqNo:	<b>768100</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.050	1.000	0	107	76.6	128			
Toluene	1.1	0.050	1.000	0	110	75	124			
Ethylbenzene	1.1	0.050	1.000	0	111	79.5	126			
Xylenes, Total	3.3	0.10	3.000	0	109	78.8	124			
Surr: 4-Bromofluorobenzene	1.1		1.000		111	80	120			

Sample ID	<b>1505007-001AMS</b>	SampType:	<b>MS</b>	TestCode:	<b>EPA Method 8021B: Volatiles</b>					
Client ID:	<b>SC-5 (2)</b>	Batch ID:	<b>R25904</b>	RunNo:	<b>25904</b>					
Prep Date:		Analysis Date:	<b>5/1/2015</b>	SeqNo:	<b>768101</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.86	0.038	0.7645	0	113	69.2	126			
Toluene	0.87	0.038	0.7645	0	113	65.6	128			
Ethylbenzene	0.88	0.038	0.7645	0.006215	114	65.5	138			
Xylenes, Total	2.6	0.076	2.294	0	114	63	139			
Surr: 4-Bromofluorobenzene	0.86		0.7645		113	80	120			

Sample ID	<b>1505007-001AMSD</b>	SampType:	<b>MSD</b>	TestCode:	<b>EPA Method 8021B: Volatiles</b>					
Client ID:	<b>SC-5 (2)</b>	Batch ID:	<b>R25904</b>	RunNo:	<b>25904</b>					
Prep Date:		Analysis Date:	<b>5/1/2015</b>	SeqNo:	<b>768103</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.83	0.038	0.7645	0	109	69.2	126	3.91	18.5	
Toluene	0.83	0.038	0.7645	0	108	65.6	128	4.33	20.6	
Ethylbenzene	0.85	0.038	0.7645	0.006215	111	65.5	138	2.55	20.1	
Xylenes, Total	2.5	0.076	2.294	0	111	63	139	2.95	21.1	
Surr: 4-Bromofluorobenzene	0.83		0.7645		109	80	120	0	0	

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH Not In Range
- RL Reporting Detection Limit

**Sample Log-In Check List**

Client Name: Animas Environmental      Work Order Number: 1505007      ReptNo: 1

Received by/date: *[Signature]* 05/01/15

Logged By: Lindsay Mangin      5/1/2015 5:50:00 AM      *[Signature]*

Completed By: Lindsay Mangin      5/1/2015 7:19:02 AM      *[Signature]*

Reviewed By: *AT 05/01/15*

**Chain of Custody**

- 1. Custody seals intact on sample bottles?      Yes       No       Not Present
- 2. Is Chain of Custody complete?      Yes       No       Not Present
- 3. How was the sample delivered?      Courier

**Log In**

- 4. Was an attempt made to cool the samples?      Yes       No       NA
- 5. Were all samples received at a temperature of >0° C to 6.0°C      Yes       No       NA
- 6. Sample(s) in proper container(s)?      Yes       No
- 7. Sufficient sample volume for indicated test(s)?      Yes       No
- 8. Are samples (except VOA and ONG) properly preserved?      Yes       No
- 9. Was preservative added to bottles?      Yes       No       NA
- 10. VOA vials have zero headspace?      Yes       No       No VOA Vials
- 11. Were any sample containers received broken?      Yes       No
- 12. Does paperwork match bottle labels?      Yes       No       # of preserved bottles checked for pH: \_\_\_\_\_  
(Note discrepancies on chain of custody)      (<2 or >12 unless noted)
- 13. Are matrices correctly identified on Chain of Custody?      Yes       No       Adjusted? \_\_\_\_\_
- 14. Is it clear what analyses were requested?      Yes       No
- 15. Were all holding times able to be met?      Yes       No       Checked by: \_\_\_\_\_  
(If no, notify customer for authorization.)

**Special Handling (if applicable)**

- 16. Was client notified of all discrepancies with this order?      Yes       No       NA

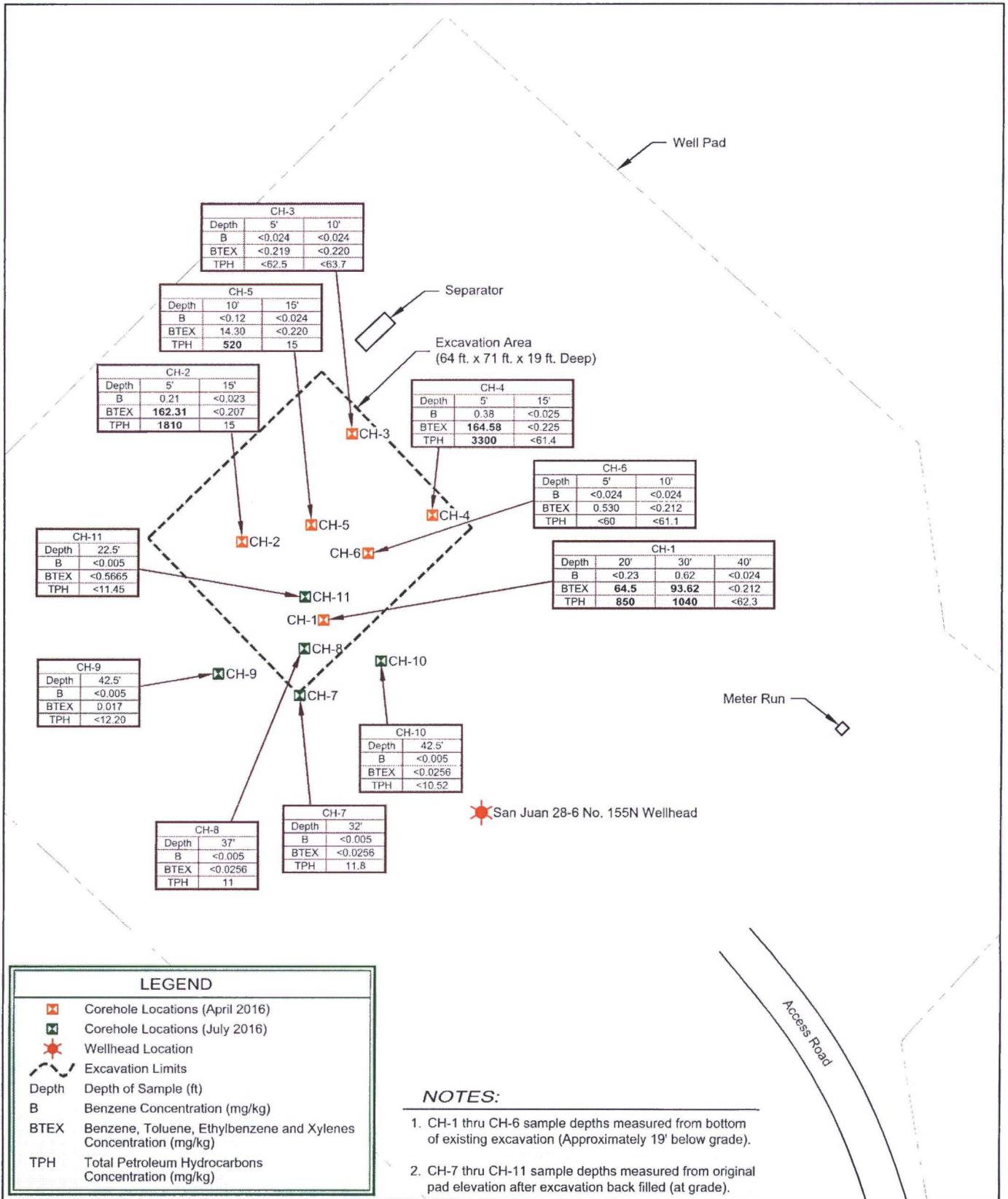
Person Notified: \_\_\_\_\_ Date: \_\_\_\_\_  
 By Whom: \_\_\_\_\_ Via:  eMail  Phone  Fax  In Person  
 Regarding: \_\_\_\_\_  
 Client Instructions: \_\_\_\_\_

17. Additional remarks:

**18. Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.1	Good	Yes			





LEGEND	
	Corehole Locations (April 2016)
	Corehole Locations (July 2016)
	Wellhead Location
	Excavation Limits
Depth	Depth of Sample (ft)
B	Benzene Concentration (mg/kg)
BTEX	Benzene, Toluene, Ethylbenzene and Xylenes Concentration (mg/kg)
TPH	Total Petroleum Hydrocarbons Concentration (mg/kg)

**NOTES:**

1. CH-1 thru CH-6 sample depths measured from bottom of existing excavation (Approximately 19' below grade).
2. CH-7 thru CH-11 sample depths measured from original pad elevation after excavation back filled (at grade).

Lat/Long: 36.63291° North, 107.48120° West



Coordinate System:  
NAD 1983 (2011) StatePlane-  
New Mexico Central (US Feet)



CONOCOPHILLIPS COMPANY  
RIO ARRIBA COUNTY, NEW MEXICO  
SAN JUAN 28-6 No. 155N

11119528-00  
Aug 3, 2016

**2016 CORING LOCATIONS AND  
ANALYTICAL RESULTS MAP**

**FIGURE 3**



Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: [www.hallenvironmental.com](http://www.hallenvironmental.com)

May 03, 2016

Jeff Walker

GHD

6121 Indian School Road, NE #200

Albuquerque, NM 87110

TEL: (505) 884-0672

FAX

RE: San Juan 28-6 155N

OrderNo.: 1604A35

Dear Jeff Walker:

Hall Environmental Analysis Laboratory received 8 sample(s) on 4/22/2016 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to [www.hallenvironmental.com](http://www.hallenvironmental.com) or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written in a cursive style.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

**Analytical Report**

Lab Order 1604A35

Date Reported: 5/3/2016

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** GHD

**Client Sample ID:** S-11119528-042116-CH-1-20'

**Project:** San Juan 28-6 155N

**Collection Date:** 4/21/2016 2:00:00 PM

**Lab ID:** 1604A35-001

**Matrix:** SOIL

**Received Date:** 4/22/2016 4:00:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>KJH</b>
Diesel Range Organics (DRO)	240	9.4		mg/Kg	1	4/28/2016 5:17:26 PM	25002
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	4/28/2016 5:17:26 PM	25002
Surr: DNOP	97.5	70-130		%Rec	1	4/28/2016 5:17:26 PM	25002
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	610	230		mg/Kg	50	4/27/2016 10:53:43 AM	25013
Surr: BFB	132	80-120	S	%Rec	50	4/27/2016 10:53:43 AM	25013
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: <b>DJF</b>
Benzene	ND	0.23		mg/Kg	10	4/28/2016 11:37:40 PM	25013
Toluene	11	0.46		mg/Kg	10	4/28/2016 11:37:40 PM	25013
Ethylbenzene	4.5	0.46		mg/Kg	10	4/28/2016 11:37:40 PM	25013
Xylenes, Total	49	0.93		mg/Kg	10	4/28/2016 11:37:40 PM	25013
Surr: Dibromofluoromethane	93.0	70-130		%Rec	10	4/28/2016 11:37:40 PM	25013
Surr: 1,2-Dichloroethane-d4	98.6	70-130		%Rec	10	4/28/2016 11:37:40 PM	25013
Surr: Toluene-d8	98.7	70-130		%Rec	10	4/28/2016 11:37:40 PM	25013
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	10	4/28/2016 11:37:40 PM	25013

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:		
*	Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E Value above quantitation range
H	Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P Sample pH Not In Range
R	RPD outside accepted recovery limits	RL Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** GHD **Client Sample ID:** S-11119528-042116-CH-1-30'  
**Project:** San Juan 28-6 155N **Collection Date:** 4/21/2016 3:30:00 PM  
**Lab ID:** 1604A35-002 **Matrix:** SOIL **Received Date:** 4/22/2016 4:00:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>KJH</b>
Diesel Range Organics (DRO)	220	9.7		mg/Kg	1	4/28/2016 6:23:11 PM	25002
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	4/28/2016 6:23:11 PM	25002
Surr: DNOP	93.5	70-130		%Rec	1	4/28/2016 6:23:11 PM	25002
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	820	240		mg/Kg	50	4/27/2016 3:00:21 PM	25013
Surr: BFB	143	80-120	S	%Rec	50	4/27/2016 3:00:21 PM	25013
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: <b>DJF</b>
Benzene	0.62	0.24		mg/Kg	10	4/29/2016 12:05:43 AM	25013
Toluene	20	0.48		mg/Kg	10	4/29/2016 12:05:43 AM	25013
Ethylbenzene	5.0	0.48		mg/Kg	10	4/29/2016 12:05:43 AM	25013
Xylenes, Total	68	0.96		mg/Kg	10	4/29/2016 12:05:43 AM	25013
Surr: Dibromofluoromethane	91.6	70-130		%Rec	10	4/29/2016 12:05:43 AM	25013
Surr: 1,2-Dichloroethane-d4	99.8	70-130		%Rec	10	4/29/2016 12:05:43 AM	25013
Surr: Toluene-d8	98.7	70-130		%Rec	10	4/29/2016 12:05:43 AM	25013
Surr: 4-Bromofluorobenzene	111	70-130		%Rec	10	4/29/2016 12:05:43 AM	25013

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b> * Value exceeds Maximum Contaminant Level. D Sample Diluted Due to Matrix H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit R RPD outside accepted recovery limits S % Recovery outside of range due to dilution or matrix	B Analyte detected in the associated Method Blank E Value above quantitation range J Analyte detected below quantitation limits P Sample pH Not In Range RL Reporting Detection Limit W Sample container temperature is out of limit as specified
---	--

# Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1604A35

Date Reported: 5/3/2016

CLIENT: GHD

Client Sample ID: S-11119528-042116-CH-2-5'

Project: San Juan 28-6 155N

Collection Date: 4/21/2016 4:45:00 PM

Lab ID: 1604A35-003

Matrix: SOIL

Received Date: 4/22/2016 4:00:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>KJH</b>
Diesel Range Organics (DRO)	310	9.5		mg/Kg	1	4/28/2016 6:45:16 PM	25002
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	4/28/2016 6:45:16 PM	25002
Surr: DNOP	94.9	70-130		%Rec	1	4/28/2016 6:45:16 PM	25002
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	1500	24		mg/Kg	5	4/27/2016 11:43:07 AM	25013
Surr: BFB	444	80-120	S	%Rec	5	4/27/2016 11:43:07 AM	25013
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: <b>DJF</b>
Benzene	0.21	0.12		mg/Kg	5	4/28/2016 5:21:42 AM	25013
Toluene	34	2.4		mg/Kg	50	4/29/2016 1:30:27 AM	25013
Ethylbenzene	8.1	0.24		mg/Kg	5	4/28/2016 5:21:42 AM	25013
Xylenes, Total	120	4.8		mg/Kg	50	4/29/2016 1:30:27 AM	25013
Surr: Dibromofluoromethane	92.6	70-130		%Rec	5	4/28/2016 5:21:42 AM	25013
Surr: 1,2-Dichloroethane-d4	101	70-130		%Rec	5	4/28/2016 5:21:42 AM	25013
Surr: Toluene-d8	99.0	70-130		%Rec	5	4/28/2016 5:21:42 AM	25013
Surr: 4-Bromofluorobenzene	126	70-130		%Rec	5	4/28/2016 5:21:42 AM	25013

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:		
*	Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E Value above quantitation range
H	Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P Sample pH Not In Range
R	RPD outside accepted recovery limits	RL Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

**Analytical Report**

Lab Order **1604A35**

Date Reported: **5/3/2016**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** GHD

**Client Sample ID:** S-11119528-042116-CH-2-15'

**Project:** San Juan 28-6 155N

**Collection Date:** 4/21/2016 6:00:00 PM

**Lab ID:** 1604A35-004

**Matrix:** SOIL

**Received Date:** 4/22/2016 4:00:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>KJH</b>
Diesel Range Organics (DRO)	15	9.7		mg/Kg	1	4/28/2016 7:07:13 PM	25002
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	4/28/2016 7:07:13 PM	25002
Surr: DNOP	97.4	70-130		%Rec	1	4/28/2016 7:07:13 PM	25002
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	4/28/2016 1:08:25 PM	25013
Surr: BFB	102	80-120		%Rec	1	4/28/2016 1:08:25 PM	25013
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: <b>DJF</b>
Benzene	ND	0.023		mg/Kg	1	4/28/2016 5:50:01 AM	25013
Toluene	ND	0.046		mg/Kg	1	4/28/2016 5:50:01 AM	25013
Ethylbenzene	ND	0.046		mg/Kg	1	4/28/2016 5:50:01 AM	25013
Xylenes, Total	ND	0.092		mg/Kg	1	4/28/2016 5:50:01 AM	25013
Surr: Dibromofluoromethane	103	70-130		%Rec	1	4/28/2016 5:50:01 AM	25013
Surr: 1,2-Dichloroethane-d4	101	70-130		%Rec	1	4/28/2016 5:50:01 AM	25013
Surr: Toluene-d8	96.9	70-130		%Rec	1	4/28/2016 5:50:01 AM	25013
Surr: 4-Bromofluorobenzene	106	70-130		%Rec	1	4/28/2016 5:50:01 AM	25013

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: GHD Client Sample ID: S-11119528-042216-CH-3-5'  
 Project: San Juan 28-6 155N Collection Date: 4/22/2016 9:00:00 AM  
 Lab ID: 1604A35-005 Matrix: SOIL Received Date: 4/22/2016 4:00:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>KJH</b>
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	4/28/2016 7:29:11 PM	25002
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	4/28/2016 7:29:11 PM	25002
Surr: DNOP	100	70-130		%Rec	1	4/28/2016 7:29:11 PM	25002
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/28/2016 1:31:50 PM	25013
Surr: BFB	96.7	80-120		%Rec	1	4/28/2016 1:31:50 PM	25013
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: <b>DJF</b>
Benzene	ND	0.024		mg/Kg	1	4/28/2016 6:18:23 AM	25013
Toluene	ND	0.049		mg/Kg	1	4/28/2016 6:18:23 AM	25013
Ethylbenzene	ND	0.049		mg/Kg	1	4/28/2016 6:18:23 AM	25013
Xylenes, Total	ND	0.097		mg/Kg	1	4/28/2016 6:18:23 AM	25013
Surr: Dibromofluoromethane	106	70-130		%Rec	1	4/28/2016 6:18:23 AM	25013
Surr: 1,2-Dichloroethane-d4	101	70-130		%Rec	1	4/28/2016 6:18:23 AM	25013
Surr: Toluene-d8	99.8	70-130		%Rec	1	4/28/2016 6:18:23 AM	25013
Surr: 4-Bromofluorobenzene	106	70-130		%Rec	1	4/28/2016 6:18:23 AM	25013

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:		
*	Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E Value above quantitation range
H	Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P Sample pH Not In Range
R	RPD outside accepted recovery limits	RL Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

**Analytical Report**

Lab Order **1604A35**

Date Reported: **5/3/2016**

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** GHD

**Client Sample ID:** S-11119528-042216-CH-3-10'

**Project:** San Juan 28-6 155N

**Collection Date:** 4/22/2016 9:30:00 AM

**Lab ID:** 1604A35-006

**Matrix:** SOIL

**Received Date:** 4/22/2016 4:00:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>KJH</b>
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	4/28/2016 7:51:02 PM	25002
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	4/28/2016 7:51:02 PM	25002
Surr: DNOP	98.1	70-130		%Rec	1	4/28/2016 7:51:02 PM	25002
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/28/2016 1:55:17 PM	25013
Surr: BFB	97.8	80-120		%Rec	1	4/28/2016 1:55:17 PM	25013
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: <b>DJF</b>
Benzene	ND	0.024		mg/Kg	1	4/29/2016 1:58:37 AM	25013
Toluene	ND	0.049		mg/Kg	1	4/29/2016 1:58:37 AM	25013
Ethylbenzene	ND	0.049		mg/Kg	1	4/29/2016 1:58:37 AM	25013
Xylenes, Total	ND	0.098		mg/Kg	1	4/29/2016 1:58:37 AM	25013
Surr: Dibromofluoromethane	100	70-130		%Rec	1	4/29/2016 1:58:37 AM	25013
Surr: 1,2-Dichloroethane-d4	97.6	70-130		%Rec	1	4/29/2016 1:58:37 AM	25013
Surr: Toluene-d8	95.4	70-130		%Rec	1	4/29/2016 1:58:37 AM	25013
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	4/29/2016 1:58:37 AM	25013

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Analytical Report

Lab Order 1604A35

Date Reported: 5/3/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD

Client Sample ID: S-11119528-042216-CH-4-5'

Project: San Juan 28-6 155N

Collection Date: 4/22/2016 10:15:00 AM

Lab ID: 1604A35-007

Matrix: SOIL

Received Date: 4/22/2016 4:00:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>KJH</b>
Diesel Range Organics (DRO)	500	9.5		mg/Kg	1	4/28/2016 8:13:00 PM	25002
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	4/28/2016 8:13:00 PM	25002
Surr: DNOP	92.6	70-130		%Rec	1	4/28/2016 8:13:00 PM	25002
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	2800	95		mg/Kg	20	4/28/2016 2:18:59 PM	25013
Surr: BFB	470	80-120	S	%Rec	20	4/28/2016 2:18:59 PM	25013
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: <b>DJF</b>
Benzene	0.38	0.024		mg/Kg	1	4/28/2016 7:14:54 AM	25013
Toluene	22	0.95		mg/Kg	20	4/29/2016 2:26:42 AM	25013
Ethylbenzene	2.2	0.048		mg/Kg	1	4/28/2016 7:14:54 AM	25013
Xylenes, Total	140	1.9		mg/Kg	20	4/29/2016 2:26:42 AM	25013
Surr: Dibromofluoromethane	0	70-130	S	%Rec	1	4/28/2016 7:14:54 AM	25013
Surr: 1,2-Dichloroethane-d4	96.8	70-130		%Rec	1	4/28/2016 7:14:54 AM	25013
Surr: Toluene-d8	103	70-130		%Rec	1	4/28/2016 7:14:54 AM	25013
Surr: 4-Bromofluorobenzene	258	70-130	S	%Rec	1	4/28/2016 7:14:54 AM	25013

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD Client Sample ID: S-11119528-042216-CH-4-15'  
 Project: San Juan 28-6 155N Collection Date: 4/22/2016 11:00:00 AM  
 Lab ID: 1604A35-008 Matrix: SOIL Received Date: 4/22/2016 4:00:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>KJH</b>
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	4/28/2016 8:34:55 PM	25002
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	4/28/2016 8:34:55 PM	25002
Surr: DNOP	96.3	70-130		%Rec	1	4/28/2016 8:34:55 PM	25002
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	4/28/2016 2:42:30 PM	25013
Surr: BFB	111	80-120		%Rec	1	4/28/2016 2:42:30 PM	25013
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: <b>DJF</b>
Benzene	ND	0.025		mg/Kg	1	4/29/2016 2:54:46 AM	25013
Toluene	ND	0.050		mg/Kg	1	4/29/2016 2:54:46 AM	25013
Ethylbenzene	ND	0.050		mg/Kg	1	4/29/2016 2:54:46 AM	25013
Xylenes, Total	ND	0.10		mg/Kg	1	4/29/2016 2:54:46 AM	25013
Surr: Dibromofluoromethane	102	70-130		%Rec	1	4/29/2016 2:54:46 AM	25013
Surr: 1,2-Dichloroethane-d4	100	70-130		%Rec	1	4/29/2016 2:54:46 AM	25013
Surr: Toluene-d8	95.4	70-130		%Rec	1	4/29/2016 2:54:46 AM	25013
Surr: 4-Bromofluorobenzene	105	70-130		%Rec	1	4/29/2016 2:54:46 AM	25013

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1604A35

03-May-16

**Client:** GHD  
**Project:** San Juan 28-6 155N

Sample ID	<b>LCS-25002</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8015M/D: Diesel Range Organics</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>25002</b>	RunNo:	<b>33843</b>					
Prep Date:	<b>4/26/2016</b>	Analysis Date:	<b>4/28/2016</b>	SeqNo:	<b>1042563</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	10	50.00	0	91.2	65.8	136			
Surr: DNOP	4.7		5.000		94.5	70	130			

Sample ID	<b>MB-25002</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8015M/D: Diesel Range Organics</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>25002</b>	RunNo:	<b>33843</b>					
Prep Date:	<b>4/26/2016</b>	Analysis Date:	<b>4/28/2016</b>	SeqNo:	<b>1042566</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	12		10.00		124	70	130			

Sample ID	<b>1604A35-001AMS</b>	SampType:	<b>MS</b>	TestCode:	<b>EPA Method 8015M/D: Diesel Range Organics</b>					
Client ID:	<b>S-11119528-042116-</b>	Batch ID:	<b>25002</b>	RunNo:	<b>33843</b>					
Prep Date:	<b>4/26/2016</b>	Analysis Date:	<b>4/28/2016</b>	SeqNo:	<b>1043205</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	290	9.8	48.83	238.8	105	33.9	141			
Surr: DNOP	4.6		4.883		95.1	70	130			

Sample ID	<b>1604A35-001AMSD</b>	SampType:	<b>MSD</b>	TestCode:	<b>EPA Method 8015M/D: Diesel Range Organics</b>					
Client ID:	<b>S-11119528-042116-</b>	Batch ID:	<b>25002</b>	RunNo:	<b>33843</b>					
Prep Date:	<b>4/26/2016</b>	Analysis Date:	<b>4/28/2016</b>	SeqNo:	<b>1043206</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	330	9.8	48.78	238.8	178	33.9	141	11.6	20	S
Surr: DNOP	4.8		4.878		97.4	70	130	0	0	

Sample ID	<b>LCS-25071</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8015M/D: Diesel Range Organics</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>25071</b>	RunNo:	<b>33883</b>					
Prep Date:	<b>4/29/2016</b>	Analysis Date:	<b>4/29/2016</b>	SeqNo:	<b>1043645</b>	Units:	<b>%Rec</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.6		5.000		91.9	70	130			

Sample ID	<b>MB-25071</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8015M/D: Diesel Range Organics</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>25071</b>	RunNo:	<b>33883</b>					
Prep Date:	<b>4/29/2016</b>	Analysis Date:	<b>4/29/2016</b>	SeqNo:	<b>1043646</b>	Units:	<b>%Rec</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

**QC SUMMARY REPORT**  
**Hall Environmental Analysis Laboratory, Inc.**

WO#: 1604A35  
 03-May-16

**Client:** GHD  
**Project:** San Juan 28-6 155N

Sample ID	<b>MB-25071</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8015M/D: Diesel Range Organics</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>25071</b>	RunNo:	<b>33883</b>					
Prep Date:	<b>4/29/2016</b>	Analysis Date:	<b>4/29/2016</b>	SeqNo:	<b>1043646</b>	Units:	<b>%Rec</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.0		10.00		90.3	70	130			

Sample ID	<b>MB-25081</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8015M/D: Diesel Range Organics</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>25081</b>	RunNo:	<b>33883</b>					
Prep Date:	<b>4/29/2016</b>	Analysis Date:	<b>4/29/2016</b>	SeqNo:	<b>1044125</b>	Units:	<b>%Rec</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.1		10.00		91.4	70	130			

Sample ID	<b>LCS-25081</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8015M/D: Diesel Range Organics</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>25081</b>	RunNo:	<b>33883</b>					
Prep Date:	<b>4/29/2016</b>	Analysis Date:	<b>4/29/2016</b>	SeqNo:	<b>1044132</b>	Units:	<b>%Rec</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.3		5.000		85.9	70	130			

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1604A35

03-May-16

**Client:** GHD  
**Project:** San Juan 28-6 155N

Sample ID	<b>MB-25015</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8015D: Gasoline Range</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>25015</b>	RunNo:	<b>33826</b>					
Prep Date:	<b>4/26/2016</b>	Analysis Date:	<b>4/27/2016</b>	SeqNo:	<b>1042318</b>	Units:	<b>%Rec</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	950		1000		95.3	80	120			

Sample ID	<b>LCS-25015</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8015D: Gasoline Range</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>25015</b>	RunNo:	<b>33826</b>					
Prep Date:	<b>4/26/2016</b>	Analysis Date:	<b>4/27/2016</b>	SeqNo:	<b>1042319</b>	Units:	<b>%Rec</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1000		1000		102	80	120			

Sample ID	<b>MB-25013</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8015D: Gasoline Range</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>25013</b>	RunNo:	<b>33826</b>					
Prep Date:	<b>4/26/2016</b>	Analysis Date:	<b>4/27/2016</b>	SeqNo:	<b>1042396</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	970		1000		96.7	80	120			

Sample ID	<b>LCS-25013</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8015D: Gasoline Range</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>25013</b>	RunNo:	<b>33826</b>					
Prep Date:	<b>4/26/2016</b>	Analysis Date:	<b>4/27/2016</b>	SeqNo:	<b>1042397</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	25.00	0	102	80	120			
Surr: BFB	1100		1000		108	80	120			

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1604A35

03-May-16

**Client:** GHD  
**Project:** San Juan 28-6 155N

Sample ID	<b>mb-24982</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8260B: Volatiles</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>24982</b>	RunNo:	<b>33839</b>					
Prep Date:	<b>4/25/2016</b>	Analysis Date:	<b>4/27/2016</b>	SeqNo:	<b>1042490</b>	Units:	<b>%Rec</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Dibromofluoromethane	0.52		0.5000		104	70	130			
Surr: 1,2-Dichloroethane-d4	0.49		0.5000		99.0	70	130			
Surr: Toluene-d8	0.50		0.5000		99.3	70	130			
Surr: 4-Bromofluorobenzene	0.52		0.5000		103	70	130			

Sample ID	<b>ics-24982</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8260B: Volatiles</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>24982</b>	RunNo:	<b>33839</b>					
Prep Date:	<b>4/25/2016</b>	Analysis Date:	<b>4/27/2016</b>	SeqNo:	<b>1042491</b>	Units:	<b>%Rec</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Dibromofluoromethane	0.52		0.5000		103	70	130			
Surr: 1,2-Dichloroethane-d4	0.51		0.5000		101	70	130			
Surr: Toluene-d8	0.49		0.5000		98.4	70	130			
Surr: 4-Bromofluorobenzene	0.52		0.5000		105	70	130			

Sample ID	<b>mb-25013</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8260B: Volatiles</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>25013</b>	RunNo:	<b>33839</b>					
Prep Date:	<b>4/26/2016</b>	Analysis Date:	<b>4/27/2016</b>	SeqNo:	<b>1042500</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: Dibromofluoromethane	0.52		0.5000		105	70	130			
Surr: 1,2-Dichloroethane-d4	0.50		0.5000		99.8	70	130			
Surr: Toluene-d8	0.49		0.5000		98.0	70	130			
Surr: 4-Bromofluorobenzene	0.53		0.5000		107	70	130			

Sample ID	<b>ics-25013</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8260B: Volatiles</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>25013</b>	RunNo:	<b>33839</b>					
Prep Date:	<b>4/26/2016</b>	Analysis Date:	<b>4/27/2016</b>	SeqNo:	<b>1042501</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.025	1.000	0	110	70	130			
Toluene	0.97	0.050	1.000	0	97.5	70	130			
Surr: Dibromofluoromethane	0.55		0.5000		110	70	130			
Surr: 1,2-Dichloroethane-d4	0.53		0.5000		105	70	130			
Surr: Toluene-d8	0.50		0.5000		100	70	130			
Surr: 4-Bromofluorobenzene	0.51		0.5000		102	70	130			

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1604A35

03-May-16

**Client:** GHD  
**Project:** San Juan 28-6 155N

Sample ID	<b>mb-25015</b>		SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8260B: Volatiles</b>						
Client ID:	<b>PBS</b>		Batch ID: <b>25015</b>	RunNo: <b>33872</b>						
Prep Date:	<b>4/26/2016</b>		Analysis Date: <b>4/28/2016</b>	SeqNo: <b>1043393</b>	Units: <b>%Rec</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Dibromofluoromethane	0.52		0.5000		103	70	130			
Surr: 1,2-Dichloroethane-d4	0.50		0.5000		101	70	130			
Surr: Toluene-d8	0.48		0.5000		96.3	70	130			
Surr: 4-Bromofluorobenzene	0.51		0.5000		102	70	130			

Sample ID	<b>lcs-25015</b>		SampType: <b>LCS</b>	TestCode: <b>EPA Method 8260B: Volatiles</b>						
Client ID:	<b>LCSS</b>		Batch ID: <b>25015</b>	RunNo: <b>33872</b>						
Prep Date:	<b>4/26/2016</b>		Analysis Date: <b>4/28/2016</b>	SeqNo: <b>1043396</b>	Units: <b>%Rec</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Dibromofluoromethane	0.52		0.5000		103	70	130			
Surr: 1,2-Dichloroethane-d4	0.50		0.5000		101	70	130			
Surr: Toluene-d8	0.47		0.5000		94.2	70	130			
Surr: 4-Bromofluorobenzene	0.51		0.5000		102	70	130			

Sample ID	<b>1604a35-002ams</b>		SampType: <b>MS</b>	TestCode: <b>EPA Method 8260B: Volatiles</b>						
Client ID:	<b>S-11119528-042116-</b>		Batch ID: <b>25013</b>	RunNo: <b>33872</b>						
Prep Date:	<b>4/26/2016</b>		Analysis Date: <b>4/29/2016</b>	SeqNo: <b>1043451</b>	Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.5	0.23	0.9328	0.6229	94.8	49.2	155			
Toluene	18	0.47	0.9328	20.15	-197	52	154			S
Surr: Dibromofluoromethane	4.3		4.664		92.4	70	130			
Surr: 1,2-Dichloroethane-d4	4.7		4.664		101	70	130			
Surr: Toluene-d8	4.5		4.664		96.5	70	130			
Surr: 4-Bromofluorobenzene	4.9		4.664		106	70	130			

Sample ID	<b>1604a35-002amsd</b>		SampType: <b>MSD</b>	TestCode: <b>EPA Method 8260B: Volatiles</b>						
Client ID:	<b>S-11119528-042116-</b>		Batch ID: <b>25013</b>	RunNo: <b>33872</b>						
Prep Date:	<b>4/26/2016</b>		Analysis Date: <b>4/29/2016</b>	SeqNo: <b>1043452</b>	Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.3	0.24	0.9662	0.6229	71.7	49.2	155	13.6	20	
Toluene	14	0.48	0.9662	20.15	-607	52	154	24.7	20	RS
Surr: Dibromofluoromethane	4.3		4.831		89.8	70	130	0	0	
Surr: 1,2-Dichloroethane-d4	4.8		4.831		98.4	70	130	0	0	
Surr: Toluene-d8	4.7		4.831		96.4	70	130	0	0	
Surr: 4-Bromofluorobenzene	5.2		4.831		107	70	130	0	0	

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified



Hall Environmental Analysis Laboratory  
 4901 Hawkins NE  
 Albuquerque, NM 87109  
 TEL: 505-345-3975 FAX: 505-345-4107  
 Website: www.hallenvironmental.com

# Sample Log-In Check List

Client Name: **GHD**

Work Order Number: **1604A35**

RcptNo: **1**

Received by/date:

*CS*

*04/22/16*

Logged By: **Ashley Gallegos**

**4/22/2016 4:00:00 PM**

*[Signature]*

Completed By: **Ashley Gallegos**

**4/23/2016 10:47:45 AM**

*[Signature]*

Reviewed By:

*AT 04/25/16*

**Chain of Custody**

- 1. Custody seals intact on sample bottles? Yes  No  Not Present
- 2. Is Chain of Custody complete? Yes  No  Not Present
- 3. How was the sample delivered? Client

**Log In**

- 4. Was an attempt made to cool the samples? Yes  No  NA
- 5. Were all samples received at a temperature of >0° C to 6.0°C Yes  No  NA
- 6. Sample(s) in proper container(s)? Yes  No
- 7. Sufficient sample volume for indicated test(s)? Yes  No
- 8. Are samples (except VOA and ONG) properly preserved? Yes  No
- 9. Was preservative added to bottles? Yes  No  NA
- 10. VOA vials have zero headspace? Yes  No  No VOA Vials
- 11. Were any sample containers received broken? Yes  No
- 12. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes  No
- 13. Are matrices correctly identified on Chain of Custody? Yes  No
- 14. Is it clear what analyses were requested? Yes  No
- 15. Were all holding times able to be met? (If no, notify customer for authorization.) Yes  No

# of preserved bottles checked for pH:   
 (<2 or >12 unless noted)   
 Adjusted?   
 Checked by:

**Special Handling (if applicable)**

- 16. Was client notified of all discrepancies with this order? Yes  No  NA

Person Notified:	<input type="text"/>	Date	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

17. Additional remarks:

**18. Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.9	Good	Not Present			

# Chain-of-Custody Record

Client: GHD

Mailing Address: 621 INDIAN SCHOOL NE  
FE 200, ABR, NM, 87110  
 Phone #: 505-884-0672  
 Email or Fax#: JEFF.WALKER @ GHD.COM

VQC Package:  
 Standard  Level 4 (Full Validation)

Accreditation  
 NELAP  Other \_\_\_\_\_

EDD (Type) \_\_\_\_\_

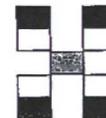
Turn-Around Time:  
 Standard  Rush

Project Name:  
SAN JUAN 28-6 #155N

Project #:  
11119528

Project Manager:  
JEFF WALKER

Sampler: C. KANACK / S. KIRCHNER  
 On Ice:  Yes  No  
 Sample Temperature: 49°C



## HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com  
 4901 Hawkins NE - Albuquerque, NM 87109  
 Tel. 505-345-3975 Fax 505-345-4107

### Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F, Cl, NO <sub>3</sub> , PO <sub>4</sub> , SO <sub>4</sub> )	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	BTEX 8260	GRO / DRO 8015	Air Bubbles (Y or N)	
<del>4-16</del>	<del>1400</del>	<del>SO</del>				<del>11604A35</del>															
4-16	1400	SO	S-11119528-042216-CH-1-20'	4oz SAR	NONE	-001													X	X	
4-16	1530	SO	S-11119528-042216-CH-1-30'			-002													X	X	
4-16	1645	SO	S-11119528-042216-CH-2-5'			-003													X	X	
4-16	1800	SO	S-11119528-042216-CH-2-15'			-004													X	X	
4-16	0900	SO	S-11119528-042216-CH-3-5'			-005													X	X	
4-16	0930	SO	S-11119528-042216-CH-3-10'			-006													X	X	
4-16	1015	SO	S-11119528-042216-CH-4-5'			-007													X	X	
4-16	1100	SO	S-11119528-042216-CH-4-15'			-008													X	X	
		SO	S-11119528-042216-CH-5																X	X	
		SO	S-11119528-04 16-CH-5																X	X	
		SO	S-11119528-04 16-CH-6																X	X	
		SO	S-11119528-04 16-CH-6																X	X	

Date:	Time:	Relinquished by:	Received by:	Date:	Time:
4-16	1600	<i>[Signature]</i>	<i>Celine Sore</i>	04/22/16	1600
Date:	Time:	Relinquished by:	Received by:	Date:	Time:

Remarks:  
 \* ALL SAMPLES FOR THIS PROJECT STANDARD TAT \*

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: [www.hallenvironmental.com](http://www.hallenvironmental.com)

May 03, 2016

Jeff Walker

GHD

6121 Indian School Road, NE #200

Albuquerque, NM 87110

TEL: (505) 884-0672

FAX

RE: San Juan 28 6 155N

OrderNo.: 1604B08

Dear Jeff Walker:

Hall Environmental Analysis Laboratory received 5 sample(s) on 4/26/2016 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to [www.hallenvironmental.com](http://www.hallenvironmental.com) or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a white background.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: GHD

Client Sample ID: S-11119528-042216-CH-1-40

Project: San Juan 28 6 155N

Collection Date: 4/22/2016 4:00:00 PM

Lab ID: 1604B08-001

Matrix: SOIL

Received Date: 4/26/2016 7:20:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>JME</b>
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	4/30/2016 12:01:16 AM	25052
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	4/30/2016 12:01:16 AM	25052
Surr: DNOP	105	70-130		%Rec	1	4/30/2016 12:01:16 AM	25052
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	4/28/2016 2:31:40 PM	25015
Surr: BFB	89.7	80-120		%Rec	1	4/28/2016 2:31:40 PM	25015
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: <b>DJF</b>
Benzene	ND	0.024		mg/Kg	1	4/29/2016 3:51:10 AM	25015
Toluene	ND	0.047		mg/Kg	1	4/29/2016 3:51:10 AM	25015
Ethylbenzene	ND	0.047		mg/Kg	1	4/29/2016 3:51:10 AM	25015
Xylenes, Total	ND	0.094		mg/Kg	1	4/29/2016 3:51:10 AM	25015
Surr: Dibromofluoromethane	103	70-130		%Rec	1	4/29/2016 3:51:10 AM	25015
Surr: 1,2-Dichloroethane-d4	98.2	70-130		%Rec	1	4/29/2016 3:51:10 AM	25015
Surr: Toluene-d8	95.0	70-130		%Rec	1	4/29/2016 3:51:10 AM	25015
Surr: 4-Bromofluorobenzene	99.7	70-130		%Rec	1	4/29/2016 3:51:10 AM	25015

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

**Analytical Report**

Lab Order 1604B08

Date Reported: 5/3/2016

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** GHD

**Client Sample ID:** S-11119528-042216-CH-5-10

**Project:** San Juan 28 6 155N

**Collection Date:** 4/22/2016 12:45:00 PM

**Lab ID:** 1604B08-002

**Matrix:** SOIL

**Received Date:** 4/26/2016 7:20:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>JME</b>
Diesel Range Organics (DRO)	280	9.5		mg/Kg	1	4/30/2016 1:05:52 AM	25052
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	4/30/2016 1:05:52 AM	25052
Surr: DNOP	100	70-130		%Rec	1	4/30/2016 1:05:52 AM	25052
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	240	93		mg/Kg	20	4/27/2016 12:57:08 PM	25015
Surr: BFB	167	80-120	S	%Rec	20	4/27/2016 12:57:08 PM	25015
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: <b>DJF</b>
Benzene	ND	0.12		mg/Kg	5	4/29/2016 3:22:58 AM	25015
Toluene	0.46	0.23		mg/Kg	5	4/29/2016 3:22:58 AM	25015
Ethylbenzene	0.84	0.23		mg/Kg	5	4/29/2016 3:22:58 AM	25015
Xylenes, Total	13	0.46		mg/Kg	5	4/29/2016 3:22:58 AM	25015
Surr: Dibromofluoromethane	98.2	70-130		%Rec	5	4/29/2016 3:22:58 AM	25015
Surr: 1,2-Dichloroethane-d4	103	70-130		%Rec	5	4/29/2016 3:22:58 AM	25015
Surr: Toluene-d8	99.8	70-130		%Rec	5	4/29/2016 3:22:58 AM	25015
Surr: 4-Bromofluorobenzene	112	70-130		%Rec	5	4/29/2016 3:22:58 AM	25015

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

**Analytical Report**

Lab Order **1604B08**

Date Reported: 5/3/2016

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** GHD

**Client Sample ID:** S-11119528-042216-CH-5-15

**Project:** San Juan 28 6 155N

**Collection Date:** 4/22/2016 1:30:00 PM

**Lab ID:** 1604B08-003

**Matrix:** SOIL

**Received Date:** 4/26/2016 7:20:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>JME</b>
Diesel Range Organics (DRO)	15	9.5		mg/Kg	1	4/30/2016 1:27:19 AM	25052
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	4/30/2016 1:27:19 AM	25052
Surr: DNOP	97.0	70-130		%Rec	1	4/30/2016 1:27:19 AM	25052
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/28/2016 2:56:13 PM	25015
Surr: BFB	103	80-120		%Rec	1	4/28/2016 2:56:13 PM	25015
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: <b>DJF</b>
Benzene	ND	0.024		mg/Kg	1	4/29/2016 4:19:27 AM	25015
Toluene	ND	0.049		mg/Kg	1	4/29/2016 4:19:27 AM	25015
Ethylbenzene	ND	0.049		mg/Kg	1	4/29/2016 4:19:27 AM	25015
Xylenes, Total	ND	0.098		mg/Kg	1	4/29/2016 4:19:27 AM	25015
Surr: Dibromofluoromethane	102	70-130		%Rec	1	4/29/2016 4:19:27 AM	25015
Surr: 1,2-Dichloroethane-d4	97.0	70-130		%Rec	1	4/29/2016 4:19:27 AM	25015
Surr: Toluene-d8	93.8	70-130		%Rec	1	4/29/2016 4:19:27 AM	25015
Surr: 4-Bromofluorobenzene	98.7	70-130		%Rec	1	4/29/2016 4:19:27 AM	25015

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

# Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1604B08

Date Reported: 5/3/2016

CLIENT: GHD

Client Sample ID: S-11119528-042216-CH-6-5

Project: San Juan 28 6 155N

Collection Date: 4/22/2016 2:50:00 PM

Lab ID: 1604B08-004

Matrix: SOIL

Received Date: 4/26/2016 7:20:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>JME</b>
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	4/30/2016 1:48:58 AM	25052
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	4/30/2016 1:48:58 AM	25052
Surr: DNOP	98.0	70-130		%Rec	1	4/30/2016 1:48:58 AM	25052
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/28/2016 3:20:50 PM	25015
Surr: BFB	96.8	80-120		%Rec	1	4/28/2016 3:20:50 PM	25015
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: <b>DJF</b>
Benzene	ND	0.024		mg/Kg	1	4/29/2016 4:47:40 AM	25015
Toluene	0.15	0.048		mg/Kg	1	4/29/2016 4:47:40 AM	25015
Ethylbenzene	ND	0.048		mg/Kg	1	4/29/2016 4:47:40 AM	25015
Xylenes, Total	0.38	0.097		mg/Kg	1	4/29/2016 4:47:40 AM	25015
Surr: Dibromofluoromethane	101	70-130		%Rec	1	4/29/2016 4:47:40 AM	25015
Surr: 1,2-Dichloroethane-d4	98.0	70-130		%Rec	1	4/29/2016 4:47:40 AM	25015
Surr: Toluene-d8	94.7	70-130		%Rec	1	4/29/2016 4:47:40 AM	25015
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	4/29/2016 4:47:40 AM	25015

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

**Hall Environmental Analysis Laboratory, Inc.**

**Analytical Report**  
 Lab Order 1604B08  
 Date Reported: 5/3/2016

**CLIENT:** GHD **Client Sample ID:** S-11119528-042216-CH-6-10  
**Project:** San Juan 28 6 155N **Collection Date:** 4/22/2016 3:45:00 PM  
**Lab ID:** 1604B08-005 **Matrix:** SOIL **Received Date:** 4/26/2016 7:20:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>JME</b>
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	4/30/2016 2:10:19 AM	25052
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	4/30/2016 2:10:19 AM	25052
Surr: DNOP	94.3	70-130		%Rec	1	4/30/2016 2:10:19 AM	25052
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	4/28/2016 3:45:23 PM	25015
Surr: BFB	95.0	80-120		%Rec	1	4/28/2016 3:45:23 PM	25015
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: <b>DJF</b>
Benzene	ND	0.024		mg/Kg	1	4/29/2016 5:15:50 AM	25015
Toluene	ND	0.047		mg/Kg	1	4/29/2016 5:15:50 AM	25015
Ethylbenzene	ND	0.047		mg/Kg	1	4/29/2016 5:15:50 AM	25015
Xylenes, Total	ND	0.094		mg/Kg	1	4/29/2016 5:15:50 AM	25015
Surr: Dibromofluoromethane	101	70-130		%Rec	1	4/29/2016 5:15:50 AM	25015
Surr: 1,2-Dichloroethane-d4	97.7	70-130		%Rec	1	4/29/2016 5:15:50 AM	25015
Surr: Toluene-d8	95.2	70-130		%Rec	1	4/29/2016 5:15:50 AM	25015
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	4/29/2016 5:15:50 AM	25015

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1604B08  
03-May-16

Client: GHD  
Project: San Juan 28 6 155N

Sample ID	LCS-25071		SampType:	LCS		TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	LCSS		Batch ID:	25071		RunNo:	33883				
Prep Date:	4/29/2016		Analysis Date:	4/29/2016		SeqNo:	1043645		Units: %Rec		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Surr: DNOP	4.6		5.000		91.9	70	130				

Sample ID	MB-25071		SampType:	MBLK		TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	PBS		Batch ID:	25071		RunNo:	33883				
Prep Date:	4/29/2016		Analysis Date:	4/29/2016		SeqNo:	1043646		Units: %Rec		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Surr: DNOP	9.0		10.00		90.3	70	130				

Sample ID	MB-25052		SampType:	MBLK		TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	PBS		Batch ID:	25052		RunNo:	33883				
Prep Date:	4/28/2016		Analysis Date:	4/29/2016		SeqNo:	1044123		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	ND	10									
Motor Oil Range Organics (MRO)	ND	50									
Surr: DNOP	10		10.00		102	70	130				

Sample ID	MB-25081		SampType:	MBLK		TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	PBS		Batch ID:	25081		RunNo:	33883				
Prep Date:	4/29/2016		Analysis Date:	4/29/2016		SeqNo:	1044125		Units: %Rec		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Surr: DNOP	9.1		10.00		91.4	70	130				

Sample ID	LCS-25052		SampType:	LCS		TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	LCSS		Batch ID:	25052		RunNo:	33883				
Prep Date:	4/28/2016		Analysis Date:	4/29/2016		SeqNo:	1044130		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	56	10	50.00	0	113	65.8	136				
Surr: DNOP	5.3		5.000		107	70	130				

Sample ID	LCS-25081		SampType:	LCS		TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	LCSS		Batch ID:	25081		RunNo:	33883				
Prep Date:	4/29/2016		Analysis Date:	4/29/2016		SeqNo:	1044132		Units: %Rec		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Surr: DNOP	4.3		5.000		85.9	70	130				

### Qualifiers:

- |   |   |
|---|---|
| * Value exceeds Maximum Contaminant Level.              | B Analyte detected in the associated Method Blank           |
| D Sample Diluted Due to Matrix                          | E Value above quantitation range                            |
| H Holding times for preparation or analysis exceeded    | J Analyte detected below quantitation limits                |
| ND Not Detected at the Reporting Limit                  | P Sample pH Not In Range                                    |
| R RPD outside accepted recovery limits                  | RL Reporting Detection Limit                                |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

**QC SUMMARY REPORT**  
**Hall Environmental Analysis Laboratory, Inc.**

WO#: 1604B08  
 03-May-16

**Client:** GHD  
**Project:** San Juan 28 6 155N

Sample ID	<b>1604B08-001AMS</b>	SampType:	<b>MS</b>	TestCode:	<b>EPA Method 8015M/D: Diesel Range Organics</b>					
Client ID:	<b>S-11119528-042216-</b>	Batch ID:	<b>25052</b>	RunNo:	<b>33883</b>					
Prep Date:	<b>4/28/2016</b>	Analysis Date:	<b>4/30/2016</b>	SeqNo:	<b>1044136</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	54	9.5	47.44	0	113	33.9	141			
Surr: DNOP	4.9		4.744		103	70	130			

Sample ID	<b>1604B08-001AMSD</b>	SampType:	<b>MSD</b>	TestCode:	<b>EPA Method 8015M/D: Diesel Range Organics</b>					
Client ID:	<b>S-11119528-042216-</b>	Batch ID:	<b>25052</b>	RunNo:	<b>33883</b>					
Prep Date:	<b>4/28/2016</b>	Analysis Date:	<b>4/30/2016</b>	SeqNo:	<b>1044137</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	50	9.4	46.77	0	108	33.9	141	6.20	20	
Surr: DNOP	4.6		4.677		97.9	70	130	0	0	

**Qualifiers:**

- |   |   |
|---|---|
| * Value exceeds Maximum Contaminant Level.              | B Analyte detected in the associated Method Blank           |
| D Sample Diluted Due to Matrix                          | E Value above quantitation range                            |
| H Holding times for preparation or analysis exceeded    | J Analyte detected below quantitation limits                |
| ND Not Detected at the Reporting Limit                  | P Sample pH Not In Range                                    |
| R RPD outside accepted recovery limits                  | RL Reporting Detection Limit                                |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1604B08  
03-May-16

Client: GHD  
Project: San Juan 28 6 155N

Sample ID	<b>MB-25015</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8015D: Gasoline Range</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>25015</b>	RunNo:	<b>33826</b>					
Prep Date:	<b>4/26/2016</b>	Analysis Date:	<b>4/27/2016</b>	SeqNo:	<b>1042318</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	950		1000		95.3	80	120			

Sample ID	<b>LCS-25015</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8015D: Gasoline Range</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>25015</b>	RunNo:	<b>33826</b>					
Prep Date:	<b>4/26/2016</b>	Analysis Date:	<b>4/27/2016</b>	SeqNo:	<b>1042319</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	25.00	0	88.0	80	120			
Surr: BFB	1000		1000		102	80	120			

### Qualifiers:

- |   |   |
|---|---|
| * Value exceeds Maximum Contaminant Level.              | B Analyte detected in the associated Method Blank           |
| D Sample Diluted Due to Matrix                          | E Value above quantitation range                            |
| H Holding times for preparation or analysis exceeded    | J Analyte detected below quantitation limits                |
| ND Not Detected at the Reporting Limit                  | P Sample pH Not In Range                                    |
| R RPD outside accepted recovery limits                  | RL Reporting Detection Limit                                |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

**QC SUMMARY REPORT**  
**Hall Environmental Analysis Laboratory, Inc.**

WO#: 1604B08  
 03-May-16

**Client:** GHD  
**Project:** San Juan 28 6 155N

Sample ID	<b>mb-25015</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8260B: Volatiles</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>25015</b>	RunNo:	<b>33872</b>					
Prep Date:	<b>4/26/2016</b>	Analysis Date:	<b>4/28/2016</b>	SeqNo:	<b>1043393</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: Dibromofluoromethane	0.52		0.5000		103	70	130			
Surr: 1,2-Dichloroethane-d4	0.50		0.5000		101	70	130			
Surr: Toluene-d8	0.48		0.5000		96.3	70	130			
Surr: 4-Bromofluorobenzene	0.51		0.5000		102	70	130			

Sample ID	<b>lcs-25015</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8260B: Volatiles</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>25015</b>	RunNo:	<b>33872</b>					
Prep Date:	<b>4/26/2016</b>	Analysis Date:	<b>4/28/2016</b>	SeqNo:	<b>1043396</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.025	1.000	0	109	70	130			
Toluene	0.99	0.050	1.000	0	99.1	70	130			
Surr: Dibromofluoromethane	0.52		0.5000		103	70	130			
Surr: 1,2-Dichloroethane-d4	0.50		0.5000		101	70	130			
Surr: Toluene-d8	0.47		0.5000		94.2	70	130			
Surr: 4-Bromofluorobenzene	0.51		0.5000		102	70	130			

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified



Hall Environmental Analysis Laboratory  
 4901 Hawkins NE  
 Albuquerque, NM 87109  
 TEL: 505-345-3975 FAX: 505-345-4107  
 Website: www.hallenvironmental.com

# Sample Log-In Check List

Client Name: **GHD**

Work Order Number: **1604B08**

RcptNo: **1**

Received by/date: *AST*  
 Logged By: **Lindsay Mangin** *ast* 4/26/2016 7:20:00 AM  
 Completed By: **Lindsay Mangin** 4/26/2016,10:29:57 AM  
 Reviewed By: *ast* *ast*

**Chain of Custody**

- 1. Custody seals intact on sample bottles? Yes  No  Not Present
- 2. Is Chain of Custody complete? Yes  No  Not Present
- 3. How was the sample delivered? Courier

**Log In**

- 4. Was an attempt made to cool the samples? Yes  No  NA
  - 5. Were all samples received at a temperature of >0° C to 6.0°C Yes  No  NA
  - 6. Sample(s) in proper container(s)? Yes  No
  - 7. Sufficient sample volume for indicated test(s)? Yes  No
  - 8. Are samples (except VOA and ONG) properly preserved? Yes  No
  - 9. Was preservative added to bottles? Yes  No  NA
  - 10. VOA vials have zero headspace? Yes  No  No VOA Vials
  - 11. Were any sample containers received broken? Yes  No
  - 12. Does paperwork match bottle labels?  
(Note discrepancies on chain of custody) Yes  No
  - 13. Are matrices correctly identified on Chain of Custody? Yes  No
  - 14. Is it clear what analyses were requested? Yes  No
  - 15. Were all holding times able to be met?  
(If no, notify customer for authorization.) Yes  No
- # of preserved bottles checked for pH:   
 (<2 or >12 unless noted)   
 Adjusted?   
 Checked by:

**Special Handling (if applicable)**

- 16. Was client notified of all discrepancies with this order? Yes  No  NA
- Person Notified: \_\_\_\_\_ Date: \_\_\_\_\_  
 By Whom: \_\_\_\_\_ Via:  eMail  Phone  Fax  In Person  
 Regarding: \_\_\_\_\_  
 Client Instructions: \_\_\_\_\_

17. Additional remarks:

**18. Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			

# Chain-of-Custody Record

Client: GHD

Mailing Address: 6121 INDIAN SCHOOL NE

FE 200, ABQ, NM 87110

Phone #: 505-884-0672

Email or Fax#: JEFF.WALKER@GHD.COM

A/QC Package:

Standard  Level 4 (Full Validation)

Accreditation:

NELAP  Other \_\_\_\_\_

Method (Type): \_\_\_\_\_

Turn-Around Time: Results 5/2  
 Standard (1 WEEK)  Rush 1 WEEK

Project Name: SAN JUAN 28-6 #155N

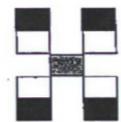
Project #: 11119528

Project Manager: JEFF WALKER

Sampler: C. KAMACK / S. KIRCHNER

On Ice:  Yes  No

Sample Temperature: 100



## HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

### Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F, Cl, NO <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub> )	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	BTEX 8260	GRO / DRO 8015	Air Bubbles (Y or N)	
22/16	1600	SO	S-11119528-042216-CH-1-40	4oz JAR	NONE	1604/B08 -001													X	X	
22/16	1245	SO	S-11119528-042216-CH-5-10			-002													X	X	
22/16	1330	SO	S-11119528-042216-CH-5-15			-003													X	X	
22/16	1450	SO	S-11119528-042216-CH-6-5			-004													X	X	
22/16	1545	SO	S-11119528-042216-CH-6-16			-005													X	X	

Date:	Time:	Relinquished by:	Received by:	Date:	Time:
25/16	1000	<u>Josh Kanner</u>	<u>Christy Waite</u>	4/25/16	1000
5/16	1849	<u>Christy Waite</u>	<u>Ann Sh</u>	04/26/16	0720

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this policy. Any subcontracted data will be clearly noted on the analytical report.



Pace Analytical Services, Inc.  
9608 Loiret Blvd.  
Lenexa, KS 66219  
(913)599-5665

July 19, 2016

Christine Mathews  
GHD Services, Inc.  
6212 Indian School Rd. NE St2  
Albuquerque, NM 87110

RE: Project: 11119528 SAN JUAN 28-6 #155N  
Pace Project No.: 60223055

Dear Christine Mathews:

Enclosed are the analytical results for sample(s) received by the laboratory on July 08, 2016. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Alice Flanagan  
alice.flanagan@pacelabs.com  
Project Manager

Enclosures

cc: Angela Bown, GHD Services, Inc.  
Jeffrey Walker, GHD Services, Inc



## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, Inc..



## CERTIFICATIONS

Project: 11119528 SAN JUAN 28-6 #155N  
Pace Project No.: 60223055

---

### Kansas Certification IDs

9608 Loiret Boulevard, Lenexa, KS 66219  
WY STR Certification #: 2456.01  
Arkansas Certification #: 15-016-0  
Illinois Certification #: 003097  
Iowa Certification #: 118  
Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055  
Nevada Certification #: KS000212008A  
Oklahoma Certification #: 9205/9935  
Texas Certification #: T104704407  
Utah Certification #: KS00021  
Kansas Field Laboratory Accreditation: # E-92587

---

### Dallas Certification IDs:

400 West Bethany Dr Suite 190, Allen, TX 75013  
EPA# TX00074  
Florida Certification #: E871118  
Texas Certification #: T104704232  
Kansas Certification #: E-10388  
Arkansas Certification #: 88-0647

Oklahoma Certification #: TX00074  
Louisiana Certification #: 30686  
Iowa Certification #: 408  
Florida Certification #: E871118  
Nevada Certification #: TX00074

---

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, Inc..

### SAMPLE SUMMARY

Project: 11119528 SAN JUAN 28-6 #155N  
Pace Project No.: 60223055

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60223055001	SL-11119528-070616-JW-B9-42.5	Solid	07/06/16 16:40	07/08/16 09:00
60223055002	SL-11119528-070716-JW-B10-42.5	Solid	07/06/16 09:10	07/08/16 09:00
60223055003	11119528-B-11@22.5	Solid	07/06/16 11:00	07/08/16 09:00
60223055004	11119528-B-11@22.5 DUP	Solid	07/06/16 11:00	07/08/16 09:00
60223055005	TRIP BLANK	Solid	07/06/16 11:00	07/08/16 09:00

### REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, Inc..

### SAMPLE ANALYTE COUNT

Project: 11119528 SAN JUAN 28-6 #155N  
Pace Project No.: 60223055

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60223055001	SL-11119528-070616-JW-B9-42.5	EPA 8015B	AJM	3	PASI-K
		TNRCC 1005	ACW	6	PASI-K
		EPA 8270 by SIM	NAW	18	PASI-K
		EPA 5035A/8260	TJT	8	PASI-K
		ASTM D2974	CEM	1	PASI-K
60223055002	SL-11119528-070716-JW-B10-42.5	EPA 8015B	AJM	3	PASI-K
		TNRCC 1005	ACW	6	PASI-K
		EPA 8270 by SIM	NAW	18	PASI-K
		EPA 5035A/8260	TJT	8	PASI-K
		ASTM D2974	CEM	1	PASI-K
60223055003	11119528-B-11@22.5	EPA 8015B	AJM	4	PASI-K
		TNRCC 1005	ACW	6	PASI-K
		TCEQ 1006	JS	14	PASI-D
		EPA 8270 by SIM	NAW	18	PASI-K
		EPA 5035A/8260	TJT	8	PASI-K
60223055004	11119528-B-11@22.5 DUP	ASTM D2974	CEM	1	PASI-K
		TCEQ 1006	JS	14	PASI-D
		ASTM D2974	CEM	1	PASI-K

### REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, Inc..

## PROJECT NARRATIVE

Project: 11119528 SAN JUAN 28-6 #155N  
Pace Project No.: 60223055

---

**Method:** EPA 8015B  
**Description:** 8015B Diesel Range Organics  
**Client:** GHD Services\_COP NM  
**Date:** July 19, 2016

### General Information:

3 samples were analyzed for EPA 8015B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

### Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

### Sample Preparation:

The samples were prepared in accordance with EPA 3546 with any exceptions noted below.

### Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

### Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

### Surrogates:

All surrogates were within QC limits with any exceptions noted below.

### Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

### Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

### Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

### Additional Comments:

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, Inc..

## PROJECT NARRATIVE

Project: 11119528 SAN JUAN 28-6 #155N  
Pace Project No.: 60223055

---

**Method:** TNRCC 1005  
**Description:** TNRCC 1005 TPH  
**Client:** GHD Services\_COP NM  
**Date:** July 19, 2016

**General Information:**

3 samples were analyzed for TNRCC 1005. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Sample Preparation:**

The samples were prepared in accordance with TNRCC 1005 with any exceptions noted below.

**Initial Calibrations (including MS Tune as applicable):**

All criteria were within method requirements with any exceptions noted below.

**Continuing Calibration:**

All criteria were within method requirements with any exceptions noted below.

**Surrogates:**

All surrogates were within QC limits with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

**Additional Comments:**

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, Inc..

## PROJECT NARRATIVE

Project: 11119528 SAN JUAN 28-6 #155N  
Pace Project No.: 60223055

---

**Method:** TCEQ 1006  
**Description:** TCEQ 1006 TPH  
**Client:** GHD Services\_COP NM  
**Date:** July 19, 2016

**General Information:**

2 samples were analyzed for TCEQ 1006. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Sample Preparation:**

The samples were prepared in accordance with TCEQ 1006 with any exceptions noted below.

**Initial Calibrations (including MS Tune as applicable):**

All criteria were within method requirements with any exceptions noted below.

**Continuing Calibration:**

All criteria were within method requirements with any exceptions noted below.

**Surrogates:**

All surrogates were within QC limits with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

**Additional Comments:**

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, Inc..

## PROJECT NARRATIVE

Project: 11119528 SAN JUAN 28-6 #155N  
Pace Project No.: 60223055

---

**Method:** EPA 8270 by SIM  
**Description:** 8270 MSSV PAH by SIM  
**Client:** GHD Services\_COP NM  
**Date:** July 19, 2016

### General Information:

3 samples were analyzed for EPA 8270 by SIM. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

### Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

### Sample Preparation:

The samples were prepared in accordance with EPA 3546 with any exceptions noted below.

### Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

### Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

### Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

### Surrogates:

All surrogates were within QC limits with any exceptions noted below.

### Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

### Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

### Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

### Additional Comments:

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, Inc..

## PROJECT NARRATIVE

Project: 11119528 SAN JUAN 28-6 #155N  
Pace Project No.: 60223055

---

**Method:** EPA 5035A/8260  
**Description:** 8260 MSV GRO and Oxygenates  
**Client:** GHD Services\_COP NM  
**Date:** July 19, 2016

### General Information:

3 samples were analyzed for EPA 5035A/8260. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

### Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

### Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

### Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

### Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

### Surrogates:

All surrogates were within QC limits with any exceptions noted below.

### Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

### Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

### Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

### Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, Inc..

### ANALYTICAL RESULTS

Project: 11119528 SAN JUAN 28-6 #155N  
Pace Project No.: 60223055

Sample: **SL-11119528-070616-JW-B9-42.5** Lab ID: **60223055001** Collected: 07/06/16 16:40 Received: 07/08/16 09:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8015B Diesel Range Organics</b>		Analytical Method: EPA 8015B Preparation Method: EPA 3546						
TPH-DRO	ND	mg/kg	11.6	1	07/15/16 00:00	07/17/16 23:07		
<b>Surrogates</b>								
n-Tetracosane (S)	90	%	49-133	1	07/15/16 00:00	07/17/16 23:07	646-31-1	
p-Terphenyl (S)	90	%	57-108	1	07/15/16 00:00	07/17/16 23:07	92-94-4	
<b>TNRCC 1005 TPH</b>		Analytical Method: TNRCC 1005 Preparation Method: TNRCC 1005						
TPH (C06-C12)	ND	mg/kg	23.9	1	07/15/16 15:05	07/16/16 02:04		
TPH (>C12-C28)	ND	mg/kg	23.9	1	07/15/16 15:05	07/16/16 02:04		
TPH (>C28-C35)	ND	mg/kg	23.9	1	07/15/16 15:05	07/16/16 02:04		
TPH Total (C06-C35)	ND	mg/kg	23.9	1	07/15/16 15:05	07/16/16 02:04		
<b>Surrogates</b>								
o-Terphenyl (S)	102	%	70-130	1	07/15/16 15:05	07/16/16 02:04	84-15-1	
1-Chlorooctane (S)	101	%	70-130	1	07/15/16 15:05	07/16/16 02:04	3386-33-2	
<b>8270 MSSV PAH by SIM</b>		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546						
Acenaphthene	ND	ug/kg	4.0	1	07/14/16 00:00	07/16/16 22:27	83-32-9	
Acenaphthylene	ND	ug/kg	4.0	1	07/14/16 00:00	07/16/16 22:27	208-96-8	
Anthracene	ND	ug/kg	4.0	1	07/14/16 00:00	07/16/16 22:27	120-12-7	
Benzo(a)anthracene	ND	ug/kg	4.0	1	07/14/16 00:00	07/16/16 22:27	56-55-3	
Benzo(a)pyrene	ND	ug/kg	4.0	1	07/14/16 00:00	07/16/16 22:27	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	4.0	1	07/14/16 00:00	07/16/16 22:27	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	4.0	1	07/14/16 00:00	07/16/16 22:27	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	4.0	1	07/14/16 00:00	07/16/16 22:27	207-08-9	
Chrysene	ND	ug/kg	4.0	1	07/14/16 00:00	07/16/16 22:27	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	4.0	1	07/14/16 00:00	07/16/16 22:27	53-70-3	
Fluoranthene	ND	ug/kg	4.0	1	07/14/16 00:00	07/16/16 22:27	206-44-0	
Fluorene	ND	ug/kg	4.0	1	07/14/16 00:00	07/16/16 22:27	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	4.0	1	07/14/16 00:00	07/16/16 22:27	193-39-5	
Naphthalene	ND	ug/kg	4.0	1	07/14/16 00:00	07/16/16 22:27	91-20-3	
Phenanthrene	ND	ug/kg	4.0	1	07/14/16 00:00	07/16/16 22:27	85-01-8	
Pyrene	ND	ug/kg	4.0	1	07/14/16 00:00	07/16/16 22:27	129-00-0	
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	80	%	62-105	1	07/14/16 00:00	07/16/16 22:27	321-60-8	
Terphenyl-d14 (S)	85	%	61-123	1	07/14/16 00:00	07/16/16 22:27	1718-51-0	
<b>8260 MSV GRO and Oxygenates</b>		Analytical Method: EPA 5035A/8260						
Benzene	ND	mg/kg	0.0060	1		07/12/16 13:54	71-43-2	
Ethylbenzene	ND	mg/kg	0.0060	1		07/12/16 13:54	100-41-4	
Toluene	<b>0.017</b>	mg/kg	0.0060	1		07/12/16 13:54	108-88-3	
TPH-GRO	ND	mg/kg	0.60	1		07/12/16 13:54		
Xylene (Total)	ND	mg/kg	0.012	1		07/12/16 13:54	1330-20-7	
<b>Surrogates</b>								
Toluene-d8 (S)	100	%	80-120	1		07/12/16 13:54	2037-26-5	
4-Bromofluorobenzene (S)	92	%	81-117	1		07/12/16 13:54	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	83-120	1		07/12/16 13:54	17060-07-0	

### REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, Inc..



### ANALYTICAL RESULTS

Project: 11119528 SAN JUAN 28-6 #155N  
Pace Project No.: 60223055

Sample: SL-11119528-070616-JW- B9-42.5    Lab ID: 60223055001    Collected: 07/06/16 16:40    Received: 07/08/16 09:00    Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>Percent Moisture</b>								
Analytical Method: ASTM D2974								
Percent Moisture	17.1	%	0.50	1		07/16/16 00:00		

### REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, Inc..

### ANALYTICAL RESULTS

Project: 11119528 SAN JUAN 28-6 #155N  
Pace Project No.: 60223055

Sample: SL-11119528-070716-JW- B10-42.5 Lab ID: 60223055002 Collected: 07/06/16 09:10 Received: 07/08/16 09:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8015B Diesel Range Organics</b>		Analytical Method: EPA 8015B Preparation Method: EPA 3546						
TPH-DRO	ND	mg/kg	10	1	07/15/16 00:00	07/17/16 23:15		
<b>Surrogates</b>								
n-Tetracosane (S)	124	%	49-133	1	07/15/16 00:00	07/17/16 23:15	646-31-1	
p-Terphenyl (S)	89	%	57-108	1	07/15/16 00:00	07/17/16 23:15	92-94-4	
<b>TNRCC 1005 TPH</b>		Analytical Method: TNRCC 1005 Preparation Method: TNRCC 1005						
TPH (C06-C12)	ND	mg/kg	20.5	1	07/15/16 15:05	07/16/16 02:52		
TPH (>C12-C28)	ND	mg/kg	20.5	1	07/15/16 15:05	07/16/16 02:52		
TPH (>C28-C35)	ND	mg/kg	20.5	1	07/15/16 15:05	07/16/16 02:52		
TPH Total (C06-C35)	ND	mg/kg	20.5	1	07/15/16 15:05	07/16/16 02:52		
<b>Surrogates</b>								
o-Terphenyl (S)	98	%	70-130	1	07/15/16 15:05	07/16/16 02:52	84-15-1	
1-Chlorooctane (S)	97	%	70-130	1	07/15/16 15:05	07/16/16 02:52	3386-33-2	
<b>8270 MSSV PAH by SIM</b>		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546						
Acenaphthene	ND	ug/kg	3.4	1	07/14/16 00:00	07/16/16 22:45	83-32-9	
Acenaphthylene	ND	ug/kg	3.4	1	07/14/16 00:00	07/16/16 22:45	208-96-8	
Anthracene	ND	ug/kg	3.4	1	07/14/16 00:00	07/16/16 22:45	120-12-7	
Benzo(a)anthracene	ND	ug/kg	3.4	1	07/14/16 00:00	07/16/16 22:45	56-55-3	
Benzo(a)pyrene	ND	ug/kg	3.4	1	07/14/16 00:00	07/16/16 22:45	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	3.4	1	07/14/16 00:00	07/16/16 22:45	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	3.4	1	07/14/16 00:00	07/16/16 22:45	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	3.4	1	07/14/16 00:00	07/16/16 22:45	207-08-9	
Chrysene	ND	ug/kg	3.4	1	07/14/16 00:00	07/16/16 22:45	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	3.4	1	07/14/16 00:00	07/16/16 22:45	53-70-3	
Fluoranthene	ND	ug/kg	3.4	1	07/14/16 00:00	07/16/16 22:45	206-44-0	
Fluorene	ND	ug/kg	3.4	1	07/14/16 00:00	07/16/16 22:45	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	3.4	1	07/14/16 00:00	07/16/16 22:45	193-39-5	
Naphthalene	8.2	ug/kg	3.4	1	07/14/16 00:00	07/16/16 22:45	91-20-3	
Phenanthrene	ND	ug/kg	3.4	1	07/14/16 00:00	07/16/16 22:45	85-01-8	
Pyrene	ND	ug/kg	3.4	1	07/14/16 00:00	07/16/16 22:45	129-00-0	
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	82	%	62-105	1	07/14/16 00:00	07/16/16 22:45	321-60-8	
Terphenyl-d14 (S)	88	%	61-123	1	07/14/16 00:00	07/16/16 22:45	1718-51-0	
<b>8260 MSV GRO and Oxygenates</b>		Analytical Method: EPA 5035A/8260						
Benzene	ND	mg/kg	0.0052	1		07/12/16 14:10	71-43-2	
Ethylbenzene	ND	mg/kg	0.0052	1		07/12/16 14:10	100-41-4	
Toluene	ND	mg/kg	0.0052	1		07/12/16 14:10	108-88-3	
TPH-GRO	ND	mg/kg	0.52	1		07/12/16 14:10		
Xylene (Total)	ND	mg/kg	0.010	1		07/12/16 14:10	1330-20-7	
<b>Surrogates</b>								
Toluene-d8 (S)	99	%	80-120	1		07/12/16 14:10	2037-26-5	
4-Bromofluorobenzene (S)	96	%	81-117	1		07/12/16 14:10	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%	83-120	1		07/12/16 14:10	17060-07-0	

### REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, Inc..



### ANALYTICAL RESULTS

Project: 11119528 SAN JUAN 28-6 #155N  
Pace Project No.: 60223055

Sample: **SL-11119528-070716-JW-B10-42.5** Lab ID: **60223055002** Collected: 07/06/16 09:10 Received: 07/08/16 09:00 Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>Percent Moisture</b>								
Analytical Method: ASTM D2974								
Percent Moisture	<b>4.5</b>	%	0.50	1		07/16/16 00:00		

### REPORT OF LABORATORY ANALYSIS

### ANALYTICAL RESULTS

Project: 11119528 SAN JUAN 28-6 #155N  
Pace Project No.: 60223055

Sample: 11119528-B-11@22.5 Lab ID: 60223055003 Collected: 07/06/16 11:00 Received: 07/08/16 09:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8015B Diesel Range Organics</b>		Analytical Method: EPA 8015B Preparation Method: EPA 3546						
TPH-DRO	ND	mg/kg	10.9	1	07/15/16 00:00	07/17/16 23:24		
TPH-DRO (C10-C28)	ND	mg/kg	10.9	1	07/15/16 00:00	07/17/16 23:24		
<b>Surrogates</b>								
n-Tetracosane (S)	117	%	49-133	1	07/15/16 00:00	07/17/16 23:24	646-31-1	
p-Terphenyl (S)	92	%	57-108	1	07/15/16 00:00	07/17/16 23:24	92-94-4	
<b>TNRCC 1005 TPH</b>		Analytical Method: TNRCC 1005 Preparation Method: TNRCC 1005						
TPH (C06-C12)	ND	mg/kg	47.7	1	07/15/16 15:05	07/16/16 03:37		
TPH (>C12-C28)	ND	mg/kg	47.7	1	07/15/16 15:05	07/16/16 03:37		
TPH (>C28-C35)	ND	mg/kg	47.7	1	07/15/16 15:05	07/16/16 03:37		
TPH Total (C06-C35)	ND	mg/kg	47.7	1	07/15/16 15:05	07/16/16 03:37		
<b>Surrogates</b>								
o-Terphenyl (S)	86	%	70-130	1	07/15/16 15:05	07/16/16 03:37	84-15-1	
1-Chlorooctane (S)	85	%	70-130	1	07/15/16 15:05	07/16/16 03:37	3386-33-2	
<b>TCEQ 1006 TPH</b>		Analytical Method: TCEQ 1006 Preparation Method: TCEQ 1006						
Aliphatic (C6)	ND	mg/kg	20.0	1	07/13/16 06:47	07/13/16 19:03		
Aliphatic (>C06-C08)	ND	mg/kg	40.0	1	07/13/16 06:47	07/13/16 19:03		
Aliphatic (>C08-C10)	ND	mg/kg	20.0	1	07/13/16 06:47	07/13/16 19:03		
Aliphatic (>C10-C12)	ND	mg/kg	20.0	1	07/13/16 06:47	07/13/16 19:03		
Aliphatic (>C12-C16)	ND	mg/kg	20.0	1	07/13/16 06:47	07/13/16 19:03		
Aliphatic (>C16-C21)	ND	mg/kg	20.0	1	07/13/16 06:47	07/13/16 19:03		
Aliphatic (>C21-C35)	ND	mg/kg	40.0	1	07/13/16 06:47	07/13/16 19:03		
Aromatic (>C07-C08)	ND	mg/kg	4.6	1	07/13/16 06:47	07/13/16 19:03		
Aromatic (>C08-C10)	ND	mg/kg	30.7	1	07/13/16 06:47	07/13/16 19:03		
Aromatic (>C10-C12)	ND	mg/kg	20.0	1	07/13/16 06:47	07/13/16 19:03		
Aromatic (>C12-C16)	ND	mg/kg	20.0	1	07/13/16 06:47	07/13/16 19:03		
Aromatic (>C16-C21)	ND	mg/kg	20.0	1	07/13/16 06:47	07/13/16 19:03		
Aromatic (>C21-C35)	ND	mg/kg	40.0	1	07/13/16 06:47	07/13/16 19:03		
C6-C35 Aliphatic & Aromatic	ND	mg/kg	4.6	1	07/13/16 06:47	07/13/16 19:03		
<b>8270 MSSV PAH by SIM</b>		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546						
Acenaphthene	ND	ug/kg	3.6	1	07/14/16 00:00	07/15/16 20:33	83-32-9	
Acenaphthylene	ND	ug/kg	3.6	1	07/14/16 00:00	07/15/16 20:33	208-96-8	
Anthracene	ND	ug/kg	3.6	1	07/14/16 00:00	07/15/16 20:33	120-12-7	
Benzo(a)anthracene	ND	ug/kg	3.6	1	07/14/16 00:00	07/15/16 20:33	56-55-3	
Benzo(a)pyrene	ND	ug/kg	3.6	1	07/14/16 00:00	07/15/16 20:33	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	3.6	1	07/14/16 00:00	07/15/16 20:33	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	3.6	1	07/14/16 00:00	07/15/16 20:33	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	3.6	1	07/14/16 00:00	07/15/16 20:33	207-08-9	
Chrysene	ND	ug/kg	3.6	1	07/14/16 00:00	07/15/16 20:33	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	3.6	1	07/14/16 00:00	07/15/16 20:33	53-70-3	
Fluoranthene	ND	ug/kg	3.6	1	07/14/16 00:00	07/15/16 20:33	206-44-0	
Fluorene	ND	ug/kg	3.6	1	07/14/16 00:00	07/15/16 20:33	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	3.6	1	07/14/16 00:00	07/15/16 20:33	193-39-5	
Naphthalene	ND	ug/kg	3.6	1	07/14/16 00:00	07/15/16 20:33	91-20-3	

### REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, Inc..



**ANALYTICAL RESULTS**

Project: 11119528 SAN JUAN 28-6 #155N  
 Pace Project No.: 60223055

Sample: 11119528-B-11@22.5 Lab ID: 60223055003 Collected: 07/06/16 11:00 Received: 07/08/16 09:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV PAH by SIM</b>		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546						
Phenanthrene	ND	ug/kg	3.6	1	07/14/16 00:00	07/15/16 20:33	85-01-8	
Pyrene	ND	ug/kg	3.6	1	07/14/16 00:00	07/15/16 20:33	129-00-0	
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	82	%	62-105	1	07/14/16 00:00	07/15/16 20:33	321-60-8	
Terphenyl-d14 (S)	106	%	61-123	1	07/14/16 00:00	07/15/16 20:33	1718-51-0	
<b>8260 MSV GRO and Oxygenates</b>		Analytical Method: EPA 5035A/8260						
Benzene	ND	mg/kg	0.0055	1		07/12/16 14:25	71-43-2	
Ethylbenzene	ND	mg/kg	0.0055	1		07/12/16 14:25	100-41-4	
Toluene	ND	mg/kg	0.0055	1		07/12/16 14:25	108-88-3	
TPH-GRO	ND	mg/kg	0.55	1		07/12/16 14:25		
Xylene (Total)	ND	mg/kg	0.011	1		07/12/16 14:25	1330-20-7	
<b>Surrogates</b>								
Toluene-d8 (S)	100	%	80-120	1		07/12/16 14:25	2037-26-5	
4-Bromofluorobenzene (S)	90	%	81-117	1		07/12/16 14:25	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	83-120	1		07/12/16 14:25	17060-07-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974						
Percent Moisture	10.0	%	0.50	1		07/16/16 00:00		

**REPORT OF LABORATORY ANALYSIS**

This report shall not be reproduced, except in full,  
 without the written consent of Pace Analytical Services, Inc..

### ANALYTICAL RESULTS

Project: 11119528 SAN JUAN 28-6 #155N  
Pace Project No.: 60223055

**Sample:** 11119528-B-11@22.5 DUP **Lab ID:** 60223055004 **Collected:** 07/06/16 11:00 **Received:** 07/08/16 09:00 **Matrix:** Solid  
*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>TCEQ 1006 TPH</b>		Analytical Method: TCEQ 1006 Preparation Method: TCEQ 1006						
Aliphatic (C6)	ND	mg/kg	27.7	1	07/13/16 06:47	07/13/16 19:29		
Aliphatic (>C06-C08)	ND	mg/kg	55.4	1	07/13/16 06:47	07/13/16 19:29		
Aliphatic (>C08-C10)	ND	mg/kg	27.7	1	07/13/16 06:47	07/13/16 19:29		
Aliphatic (>C10-C12)	ND	mg/kg	27.7	1	07/13/16 06:47	07/13/16 19:29		
Aliphatic (>C12-C16)	ND	mg/kg	27.7	1	07/13/16 06:47	07/13/16 19:29		
Aliphatic (>C16-C21)	ND	mg/kg	27.7	1	07/13/16 06:47	07/13/16 19:29		
Aliphatic (>C21-C35)	ND	mg/kg	55.4	1	07/13/16 06:47	07/13/16 19:29		
Aromatic (>C07-C08)	ND	mg/kg	6.4	1	07/13/16 06:47	07/13/16 19:29		
Aromatic (>C08-C10)	ND	mg/kg	42.6	1	07/13/16 06:47	07/13/16 19:29		
Aromatic (>C10-C12)	ND	mg/kg	27.7	1	07/13/16 06:47	07/13/16 19:29		
Aromatic (>C12-C16)	ND	mg/kg	27.7	1	07/13/16 06:47	07/13/16 19:29		
Aromatic (>C16-C21)	ND	mg/kg	27.7	1	07/13/16 06:47	07/13/16 19:29		
Aromatic (>C21-C35)	ND	mg/kg	55.4	1	07/13/16 06:47	07/13/16 19:29		
C6-C35 Aliphatic & Aromatic	ND	mg/kg	6.4	1	07/13/16 06:47	07/13/16 19:29		
<b>Percent Moisture</b>		Analytical Method: ASTM D2974						
Percent Moisture	4.6	%	0.50	1		07/16/16 00:00		

### REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, Inc..

**QUALITY CONTROL DATA**

Project: 11119528 SAN JUAN 28-6 #155N

Pace Project No.: 60223055

QC Batch: 438162 Analysis Method: EPA 5035A/8260  
 QC Batch Method: EPA 5035A/8260 Analysis Description: 8260 MSV GRO and Oxygenates  
 Associated Lab Samples: 60223055001, 60223055002, 60223055003

METHOD BLANK: 1791988 Matrix: Solid

Associated Lab Samples: 60223055001, 60223055002, 60223055003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	mg/kg	ND	0.0050	07/12/16 12:07	
Ethylbenzene	mg/kg	ND	0.0050	07/12/16 12:07	
Toluene	mg/kg	ND	0.0050	07/12/16 12:07	
TPH-GRO	mg/kg	ND	0.50	07/12/16 12:07	
Xylene (Total)	mg/kg	ND	0.010	07/12/16 12:07	
1,2-Dichloroethane-d4 (S)	%	101	83-120	07/12/16 12:07	
4-Bromofluorobenzene (S)	%	92	81-117	07/12/16 12:07	
Toluene-d8 (S)	%	101	80-120	07/12/16 12:07	

LABORATORY CONTROL SAMPLE: 1791989

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	mg/kg	.1	0.092	92	75-116	
Ethylbenzene	mg/kg	.1	0.089	89	72-116	
Toluene	mg/kg	.1	0.087	87	72-116	
TPH-GRO	mg/kg	4	4.2	105	76-128	
Xylene (Total)	mg/kg	.3	0.27	91	69-116	
1,2-Dichloroethane-d4 (S)	%			102	83-120	
4-Bromofluorobenzene (S)	%			105	81-117	
Toluene-d8 (S)	%			97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1791990 1791991

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual	
		Spike Conc.	Result	Spike Conc.	Result						
Benzene	mg/kg	ND	.11	.11	0.087	0.098	79	88	28-136	11	36
Ethylbenzene	mg/kg	ND	.11	.11	0.080	0.088	73	80	10-152	9	48
Toluene	mg/kg	ND	.11	.11	0.083	0.092	75	83	19-141	11	40
Xylene (Total)	mg/kg	ND	.33	.33	0.24	0.27	74	81	10-149	9	50
1,2-Dichloroethane-d4 (S)	%						100	100	83-120		
4-Bromofluorobenzene (S)	%						103	102	81-117		
Toluene-d8 (S)	%						99	99	80-120		38

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

**REPORT OF LABORATORY ANALYSIS**

This report shall not be reproduced, except in full, without the written consent of Pace Analytical Services, Inc..

### QUALITY CONTROL DATA

Project: 11119528 SAN JUAN 28-6 #155N  
Pace Project No.: 60223055

QC Batch: 438615 Analysis Method: EPA 8015B  
QC Batch Method: EPA 3546 Analysis Description: EPA 8015B  
Associated Lab Samples: 60223055001, 60223055002, 60223055003

METHOD BLANK: 1794138 Matrix: Solid  
Associated Lab Samples: 60223055001, 60223055002, 60223055003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
TPH-DRO	mg/kg	ND	9.8	07/17/16 22:50	
TPH-DRO (C10-C28)	mg/kg	ND	9.8	07/17/16 22:50	
n-Tetracosane (S)	%	95	49-133	07/17/16 22:50	
p-Terphenyl (S)	%	95	57-108	07/17/16 22:50	

LABORATORY CONTROL SAMPLE: 1794139

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
TPH-DRO	mg/kg	78.9	79.1	100	77-122	
TPH-DRO (C10-C28)	mg/kg	78.9	79.1	100	79-124	
n-Tetracosane (S)	%			98	49-133	
p-Terphenyl (S)	%			99	57-108	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1794140 1794141

Parameter	Units	60223055003 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MS Spike Conc.	MSD Spike Conc.	MS Result						
TPH-DRO	mg/kg	ND	90.8	90.2	95.1	94.6	101	101	44-138	1	71	
TPH-DRO (C10-C28)	mg/kg	ND	90.8	90.2	95.1	94.6	101	101	10-209	1	72	
n-Tetracosane (S)	%						123	119	49-133		58	
p-Terphenyl (S)	%						99	96	57-108		56	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

### REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, Inc..

### QUALITY CONTROL DATA

Project: 11119528 SAN JUAN 28-6 #155N  
Pace Project No.: 60223055

QC Batch: 438459 Analysis Method: EPA 8270 by SIM  
QC Batch Method: EPA 3546 Analysis Description: 8270/3546 MSSV PAH by SIM  
Associated Lab Samples: 60223055001, 60223055002, 60223055003

METHOD BLANK: 1793214 Matrix: Solid  
Associated Lab Samples: 60223055001, 60223055002, 60223055003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Acenaphthene	ug/kg	ND	3.2	07/15/16 16:55	
Acenaphthylene	ug/kg	ND	3.2	07/15/16 16:55	
Anthracene	ug/kg	ND	3.2	07/15/16 16:55	
Benzo(a)anthracene	ug/kg	ND	3.2	07/15/16 16:55	
Benzo(a)pyrene	ug/kg	ND	3.2	07/15/16 16:55	
Benzo(b)fluoranthene	ug/kg	ND	3.2	07/15/16 16:55	
Benzo(g,h,i)perylene	ug/kg	ND	3.2	07/15/16 16:55	
Benzo(k)fluoranthene	ug/kg	ND	3.2	07/15/16 16:55	
Chrysene	ug/kg	ND	3.2	07/15/16 16:55	
Dibenz(a,h)anthracene	ug/kg	ND	3.2	07/15/16 16:55	
Fluoranthene	ug/kg	ND	3.2	07/15/16 16:55	
Fluorene	ug/kg	ND	3.2	07/15/16 16:55	
Indeno(1,2,3-cd)pyrene	ug/kg	ND	3.2	07/15/16 16:55	
Naphthalene	ug/kg	ND	3.2	07/15/16 16:55	
Phenanthrene	ug/kg	ND	3.2	07/15/16 16:55	
Pyrene	ug/kg	ND	3.2	07/15/16 16:55	
2-Fluorobiphenyl (S)	%	74	62-105	07/15/16 16:55	
Terphenyl-d14 (S)	%	89	61-123	07/15/16 16:55	

LABORATORY CONTROL SAMPLE: 1793215

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Acenaphthene	ug/kg	32.1	27.4	85	60-111	
Acenaphthylene	ug/kg	32.1	27.3	85	56-111	
Anthracene	ug/kg	32.1	26.1	81	52-115	
Benzo(a)anthracene	ug/kg	32.1	27.7	86	59-119	
Benzo(a)pyrene	ug/kg	32.1	27.1	84	49-119	
Benzo(b)fluoranthene	ug/kg	32.1	30.1	94	56-121	
Benzo(g,h,i)perylene	ug/kg	32.1	26.2	82	46-123	
Benzo(k)fluoranthene	ug/kg	32.1	29.0	90	59-116	
Chrysene	ug/kg	32.1	30.8	96	48-116	
Dibenz(a,h)anthracene	ug/kg	32.1	28.8	90	46-126	
Fluoranthene	ug/kg	32.1	27.0	84	58-118	
Fluorene	ug/kg	32.1	27.8	87	58-115	
Indeno(1,2,3-cd)pyrene	ug/kg	32.1	26.2	82	47-124	
Naphthalene	ug/kg	32.1	28.0	87	51-121	
Phenanthrene	ug/kg	32.1	27.1	84	60-110	
Pyrene	ug/kg	32.1	28.9	90	60-119	
2-Fluorobiphenyl (S)	%			79	62-105	
Terphenyl-d14 (S)	%			86	61-123	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

### REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, Inc..

**QUALITY CONTROL DATA**

Project: 11119528 SAN JUAN 28-6 #155N  
Pace Project No.: 60223055

Parameter	Units	MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1793216		1793217		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
		60223055003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Acenaphthene	ug/kg	ND	35.6	36.9	28.8	30.3	81	82	36-127	5	51		
Acenaphthylene	ug/kg	ND	35.6	36.9	30.3	30.3	85	82	31-133	0	72		
Anthracene	ug/kg	ND	35.6	36.9	29.2	30.7	82	83	26-138	5	49		
Benzo(a)anthracene	ug/kg	ND	35.6	36.9	29.7	32.4	84	88	31-148	9	73		
Benzo(a)pyrene	ug/kg	ND	35.6	36.9	29.7	31.4	84	85	19-148	5	67		
Benzo(b)fluoranthene	ug/kg	ND	35.6	36.9	29.9	31.5	84	86	27-152	5	59		
Benzo(g,h,i)perylene	ug/kg	ND	35.6	36.9	29.7	30.5	83	83	10-153	2	73		
Benzo(k)fluoranthene	ug/kg	ND	35.6	36.9	30.0	31.3	84	85	10-157	4	61		
Chrysene	ug/kg	ND	35.6	36.9	33.7	34.6	95	94	10-154	3	73		
Dibenz(a,h)anthracene	ug/kg	ND	35.6	36.9	31.2	31.6	88	86	28-135	1	48		
Fluoranthene	ug/kg	ND	35.6	36.9	27.5	29.9	77	81	10-169	8	77		
Fluorene	ug/kg	ND	35.6	36.9	30.0	31.1	84	84	19-148	3	54		
Indeno(1,2,3-cd)pyrene	ug/kg	ND	35.6	36.9	30.4	29.7	85	81	21-142	2	58		
Naphthalene	ug/kg	ND	35.6	36.9	30.0	31.1	84	84	10-175	4	66		
Phenanthrene	ug/kg	ND	35.6	36.9	30.1	31.6	84	86	10-201	5	91		
Pyrene	ug/kg	ND	35.6	36.9	33.2	35.9	93	97	10-206	8	74		
2-Fluorobiphenyl (S)	%						81	81	62-105		43		
Terphenyl-d14 (S)	%						94	97	61-123		46		

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

**REPORT OF LABORATORY ANALYSIS**

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, Inc..

**QUALITY CONTROL DATA**

Project: 11119528 SAN JUAN 28-6 #155N  
Pace Project No.: 60223055

QC Batch: 438486 Analysis Method: TNRCC 1005  
QC Batch Method: TNRCC 1005 Analysis Description: TX1005 TPH GCS  
Associated Lab Samples: 60223055001, 60223055002, 60223055003

METHOD BLANK: 1793263 Matrix: Solid  
Associated Lab Samples: 60223055001, 60223055002, 60223055003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
TPH (>C12-C28)	mg/kg	ND	20.0	07/15/16 16:53	
TPH (>C28-C35)	mg/kg	ND	20.0	07/15/16 16:53	
TPH (C06-C12)	mg/kg	ND	20.0	07/15/16 16:53	
TPH Total (C06-C35)	mg/kg	ND	20.0	07/15/16 16:53	
1-Chlorooctane (S)	%	109	70-130	07/15/16 16:53	
o-Terphenyl (S)	%	110	70-130	07/15/16 16:53	

LABORATORY CONTROL SAMPLE & LCSD: 1793264 1793265

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
TPH Total (C06-C35)	mg/kg	2500	2180	1930	87	77	75-125	12	23	
1-Chlorooctane (S)	%				118	105	70-130			
o-Terphenyl (S)	%				104	91	70-130			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1793266 1793267

Parameter	Units	60223055003		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	Spike Conc.	Result	MS Result	MSD Result	% Rec	% Rec				
TPH Total (C06-C35)	mg/kg	ND	5570	5900	5630	5250	101	89	75-125	7	23		
1-Chlorooctane (S)	%						130	116	70-130				
o-Terphenyl (S)	%						109	96	70-130				

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

**REPORT OF LABORATORY ANALYSIS**

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, Inc..

**QUALITY CONTROL DATA**

Project: 11119528 SAN JUAN 28-6 #155N  
Pace Project No.: 60223055

QC Batch: 57756 Analysis Method: TCEQ 1006  
QC Batch Method: TCEQ 1006 Analysis Description: TX1006 TPH GCS  
Associated Lab Samples: 60223055003, 60223055004

METHOD BLANK: 242704 Matrix: Solid  
Associated Lab Samples: 60223055003, 60223055004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aliphatic (>C06-C08)	mg/kg	ND	25.9	07/13/16 16:51	
Aliphatic (>C08-C10)	mg/kg	ND	13.0	07/13/16 16:51	
Aliphatic (>C10-C12)	mg/kg	ND	13.0	07/13/16 16:51	
Aliphatic (>C12-C16)	mg/kg	ND	13.0	07/13/16 16:51	
Aliphatic (>C16-C21)	mg/kg	ND	13.0	07/13/16 16:51	
Aliphatic (>C21-C35)	mg/kg	ND	25.9	07/13/16 16:51	
Aliphatic (C6)	mg/kg	ND	13.0	07/13/16 16:51	
Aromatic (>C07-C08)	mg/kg	ND	3.0	07/13/16 16:51	
Aromatic (>C08-C10)	mg/kg	ND	19.9	07/13/16 16:51	
Aromatic (>C10-C12)	mg/kg	ND	13.0	07/13/16 16:51	
Aromatic (>C12-C16)	mg/kg	ND	13.0	07/13/16 16:51	
Aromatic (>C16-C21)	mg/kg	ND	13.0	07/13/16 16:51	
Aromatic (>C21-C35)	mg/kg	ND	25.9	07/13/16 16:51	
C6-C35 Aliphatic & Aromatic	mg/kg	ND	3.0	07/13/16 16:51	

LABORATORY CONTROL SAMPLE & LCSD: 242705 242706

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
C6-C35 Aliphatic & Aromatic	mg/kg	313	218	216	69	69	60-140	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 242707 242708

Parameter	Units	60223055003		60223055004		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
C6-C35 Aliphatic & Aromatic	mg/kg	ND	770	730	498	483	65	66	60-140	3	20

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

**REPORT OF LABORATORY ANALYSIS**

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, Inc..

**QUALITY CONTROL DATA**

Project: 11119528 SAN JUAN 28-6 #155N  
Pace Project No.: 60223055

QC Batch: 438797 Analysis Method: ASTM D2974  
QC Batch Method: ASTM D2974 Analysis Description: Dry Weight/Percent Moisture  
Associated Lab Samples: 60223055001, 60223055002, 60223055003, 60223055004

METHOD BLANK: 1795005 Matrix: Solid  
Associated Lab Samples: 60223055001, 60223055002, 60223055003, 60223055004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Percent Moisture	%	ND	0.50	07/16/16 00:00	

SAMPLE DUPLICATE: 1795154

Parameter	Units	60223055003 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	10.0	9.9	1	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

**REPORT OF LABORATORY ANALYSIS**

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, Inc..

## QUALIFIERS

Project: 11119528 SAN JUAN 28-6 #155N  
Pace Project No.: 60223055

---

### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.  
ND - Not Detected at or above adjusted reporting limit.  
J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.  
MDL - Adjusted Method Detection Limit.  
PQL - Practical Quantitation Limit.  
RL - Reporting Limit.  
S - Surrogate  
1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.  
Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.  
LCS(D) - Laboratory Control Sample (Duplicate)  
MS(D) - Matrix Spike (Duplicate)  
DUP - Sample Duplicate  
RPD - Relative Percent Difference  
NC - Not Calculable.  
SG - Silica Gel - Clean-Up  
U - Indicates the compound was analyzed for, but not detected.  
N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.  
Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.  
TNI - The NELAC Institute.

### LABORATORIES

PASI-D Pace Analytical Services - Dallas  
PASI-K Pace Analytical Services - Kansas City

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, Inc..



**QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Project: 11119528 SAN JUAN 28-6 #155N  
 Pace Project No.: 60223055

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60223055001	SL-11119528-070616-JW-B9-42.5	EPA 3546	438615	EPA 8015B	438810
60223055002	SL-11119528-070716-JW-B10-42.5	EPA 3546	438615	EPA 8015B	438810
60223055003	11119528-B-11@22.5	EPA 3546	438615	EPA 8015B	438810
60223055001	SL-11119528-070616-JW-B9-42.5	TNRCC 1005	438486	TNRCC 1005	438823
60223055002	SL-11119528-070716-JW-B10-42.5	TNRCC 1005	438486	TNRCC 1005	438823
60223055003	11119528-B-11@22.5	TNRCC 1005	438486	TNRCC 1005	438823
60223055003	11119528-B-11@22.5	TCEQ 1006	57756	TCEQ 1006	57812
60223055004	11119528-B-11@22.5 DUP	TCEQ 1006	57756	TCEQ 1006	57812
60223055001	SL-11119528-070616-JW-B9-42.5	EPA 3546	438459	EPA 8270 by SIM	438757
60223055002	SL-11119528-070716-JW-B10-42.5	EPA 3546	438459	EPA 8270 by SIM	438757
60223055003	11119528-B-11@22.5	EPA 3546	438459	EPA 8270 by SIM	438757
60223055001	SL-11119528-070616-JW-B9-42.5	EPA 5035A/8260	438162		
60223055002	SL-11119528-070716-JW-B10-42.5	EPA 5035A/8260	438162		
60223055003	11119528-B-11@22.5	EPA 5035A/8260	438162		
60223055001	SL-11119528-070616-JW-B9-42.5	ASTM D2974	438797		
60223055002	SL-11119528-070716-JW-B10-42.5	ASTM D2974	438797		
60223055003	11119528-B-11@22.5	ASTM D2974	438797		
60223055004	11119528-B-11@22.5 DUP	ASTM D2974	438797		

**REPORT OF LABORATORY ANALYSIS**

This report shall not be reproduced, except in full,  
 without the written consent of Pace Analytical Services, Inc..



Sample Condition Upon Receipt

WO#: 60223055



Client Name: GHD - NM

Optional
Proj Due Date:
Proj Name:

Courier: FedEx  UPS  VIA  Clay  PEX  ECI  Pace  Other  Client

Tracking #: 6508 8165 1977 Pace Shipping Label Used? Yes  No

Custody Seal on Cooler/Box Present: Yes  No  Seals intact: Yes  No

Packing Material: Bubble Wrap  Bubble Bags  Foam  None  Other

Thermometer Used: T-266 <sup>CF 0.1</sup> T-239 Type of Ice: Wet Blue None  Samples received on ice, cooling process has begun.

Cooler Temperature: 2.6

Date and initials of person examining contents: JA 7/8/16 950

Temperature should be above freezing to 6°C

Chain of Custody present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody filled out:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler name & signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples arrived within holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time analyses (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
Pace containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Filtered volume received for dissolved tests?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	12.
Sample labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Includes date/time/ID/analyses Matrix: <u>water soil</u>		13.
All containers needing preservation have been checked.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Exceptions: VOA, Coliform, O&G, WI-DRO (water)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed <u>JA</u>
Trip Blank present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Lot # of added preservative
Pace Trip Blank lot # (if purchased): <u>0320/6-3</u>		15.
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	16.
Project sampled in USDA Regulated Area:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	17. List State: <u>NM</u>
Additional labels attached to 5035A vials in the field?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	18.

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

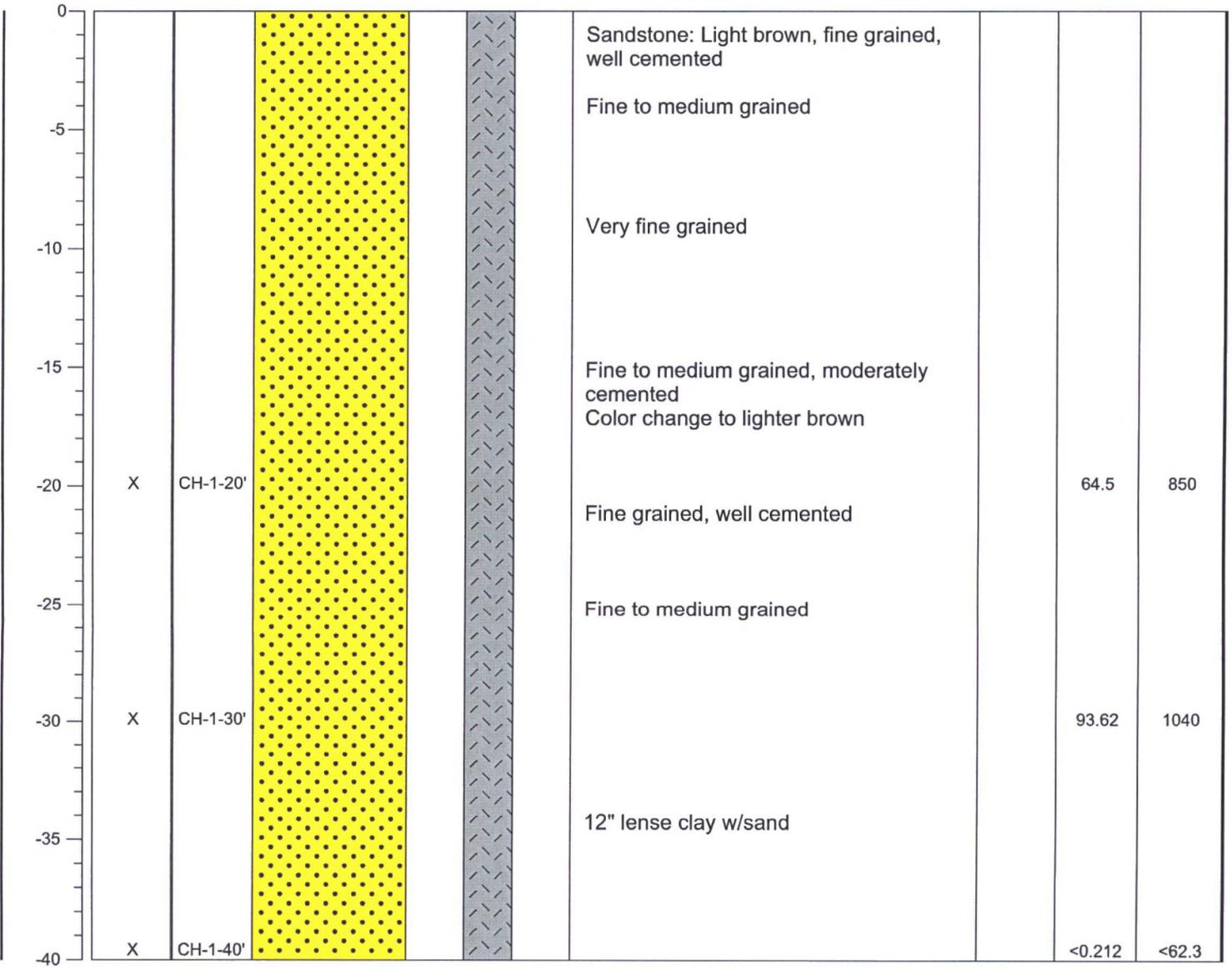
Project Manager Review: af Date: 7/8/16



PROJECT NAME: San Juan 28-6 #155N  
 LOCATION: Rio Arriba County, New Mexico  
 FIELD LOGGED BY: Cale Kanack  
 SURFACE ELEVATION (msl): Unavailable  
 GROUNDWATER ELEVATION (msl): N/A  
 REMARKS: \* Depths measured from bottom of existing excavation (approximately 19' below grade)  
 COORDINATES: Unavailable

SOIL BORING NO: CH-1  
 DRILL TYPE: Air Rotary  
 CME-850  
 BORE HOLE DIAMETER: 6"  
 DRILLED BY: Yellow Jacket Drilling  
 DATE/TIME HOLE STARTED: 4-21-16 / 1030  
 DATE/TIME HOLE COMPLETED: 4-22-16 / 1600

DEPTH (bgs) - ft	SAMPLE TO LAB	SAMPLE ID	STRATAGRAPHIC SEQUENCE	COMPLETION INFORMATION	CLASSIFICATION AND DESCRIPTION	PID (ppm)	Total BTEX (mg/kg)	Total TPH (mg/kg)
------------------	---------------	-----------	------------------------	------------------------	--------------------------------	-----------	--------------------	-------------------



PROJECT NAME: San Juan 28-6 #155N	SOIL BORING NO: CH-2
LOCATION: Rio Arriba County, New Mexico	DRILL TYPE: Air Rotary
FIELD LOGGED BY: Cale Kanack	CME-850
SURFACE ELEVATION (msl): Unavailable	BORE HOLE DIAMETER: 6"
GROUNDWATER ELEVATION (msl): N/A	DRILLED BY: Yellow Jacket Drilling
REMARKS: * Depths measured from bottom of existing excavation (approximately 19' below grade)	DATE/TIME HOLE STARTED: 4-21-16 / 1630
COORDINATES: Unavailable	DATE/TIME HOLE COMPLETED: 4-21-16 / 1815

DEPTH (bgs) - ft	SAMPLE TO LAB	SAMPLE ID	STRATAGRAPHIC SEQUENCE	COMPLETION INFORMATION	CLASSIFICATION AND DESCRIPTION	PID (ppm)	Total BTEX (mg/kg)	Total TPH (mg/kg)
------------------	---------------	-----------	------------------------	------------------------	--------------------------------	-----------	--------------------	-------------------

0					Sandstone: Light brown, fine grained, very well cemented			
-5	X	CH-2-5'					162.31	1810
-10								
-15	X	CH-2-15'			Light brown/tan, very fine grained, well cemented		<0.207	15

PROJECT NAME: San Juan 28-6 #155N	SOIL BORING NO: CH-3
LOCATION: Rio Arriba County, New Mexico	DRILL TYPE: Air Rotary
FIELD LOGGED BY: Cale Kanack	CME-850
SURFACE ELEVATION (msl): Unavailable	BORE HOLE DIAMETER: 6"
GROUNDWATER ELEVATION (msl): N/A	DRILLED BY: Yellow Jacket Drilling
REMARKS: * Depths measured from bottom of existing excavation (approximately 19' below grade)	DATE/TIME HOLE STARTED: 4-22-16 / 0845
COORDINATES: Unavailable	DATE/TIME HOLE COMPLETED: 4-22-16 / 0945

DEPTH (bgs) - ft	SAMPLE TO LAB	SAMPLE ID	STRATAGRAPHIC SEQUENCE	COMPLETION INFORMATION	CLASSIFICATION AND DESCRIPTION	PID (ppm)	Total BTEX (mg/kg)	Total TPH (mg/kg)
------------------	---------------	-----------	------------------------	------------------------	--------------------------------	-----------	--------------------	-------------------

0					Sandstone: Light brown/tan, very fine grained, very well cemented			
-5	X	CH-3-5'					<0.219	<62.5
-10	X	CH-3-10'			Light brown, fine to medium grained, moderately cemented		<0.220	<63.7

PROJECT NAME: San Juan 28-6 #155N  
 LOCATION: Rio Arriba County, New Mexico  
 FIELD LOGGED BY: Cale Kanack  
 SURFACE ELEVATION (msl): Unavailable  
 GROUNDWATER ELEVATION (msl): N/A  
 REMARKS: \* Depths measured from bottom of existing excavation (approximately 19' below grade)  
 COORDINATES: Unavailable

SOIL BORING NO: CH-4  
 DRILL TYPE: Air Rotary  
 CME-850  
 BORE HOLE DIAMETER: 6"  
 DRILLED BY: Yellow Jacket Drilling  
 DATE/TIME HOLE STARTED: 4-22-16 / 1005  
 DATE/TIME HOLE COMPLETED: 4-22-16 / 1115

DEPTH (bgs) - ft	SAMPLE TO LAB	SAMPLE ID	STRATAGRAPHIC SEQUENCE	COMPLETION INFORMATION	CLASSIFICATION AND DESCRIPTION	PID (ppm)	Total BTEX (mg/kg)	Total TPH (mg/kg)
------------------	---------------	-----------	------------------------	------------------------	--------------------------------	-----------	--------------------	-------------------

0					Sandstone: Light brown/tan, very fine grained, very well cemented			
-5	X	CH-4-5'					164.58	3300
-10					Brown, fine to medium grained, very well cemented			
-15	X	CH-4-15'					<0.225	<61.4

TD = 15 feet \*



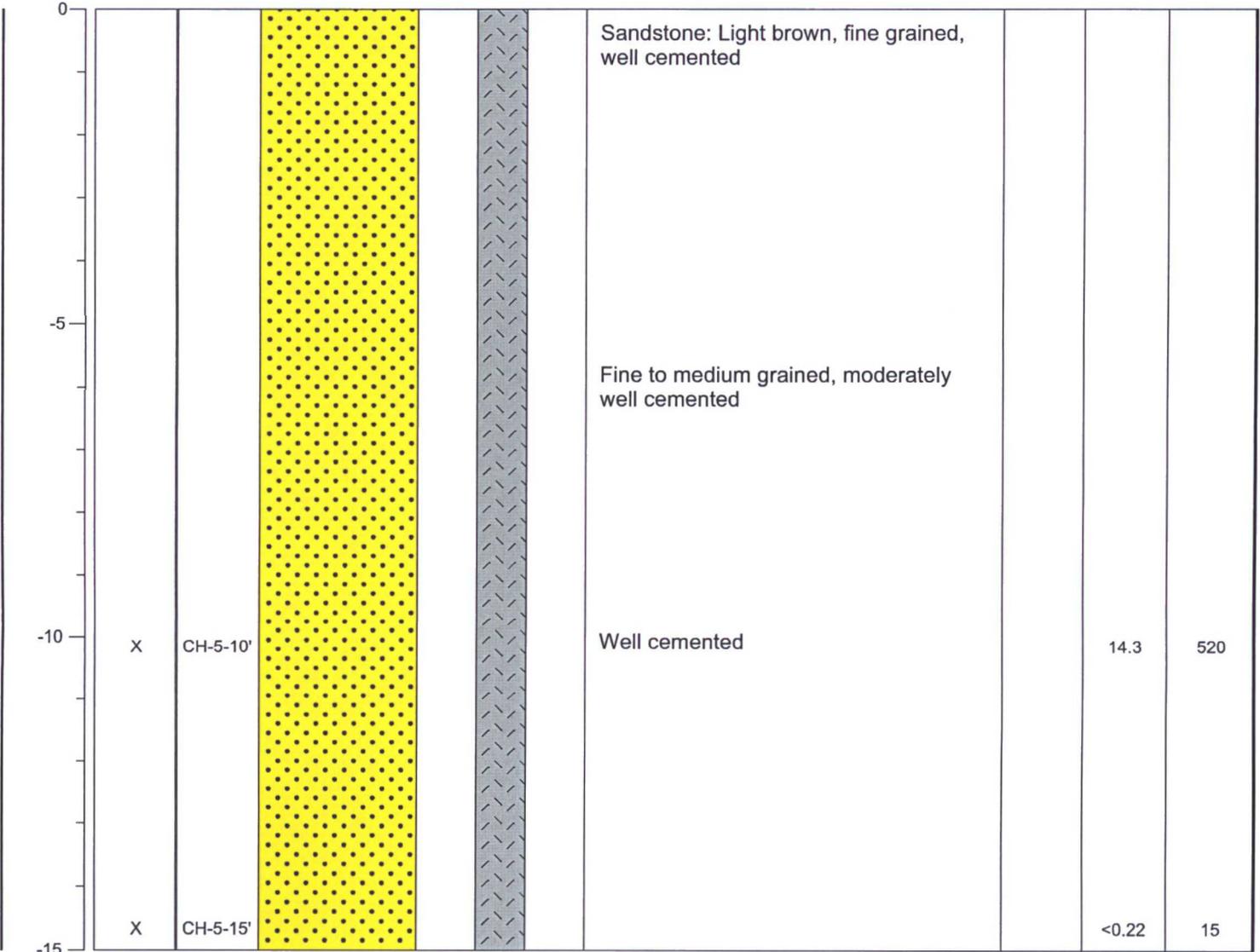
Services Inc.

BORING LOG AND WELL COMPLETION FORM

page 1 of 1

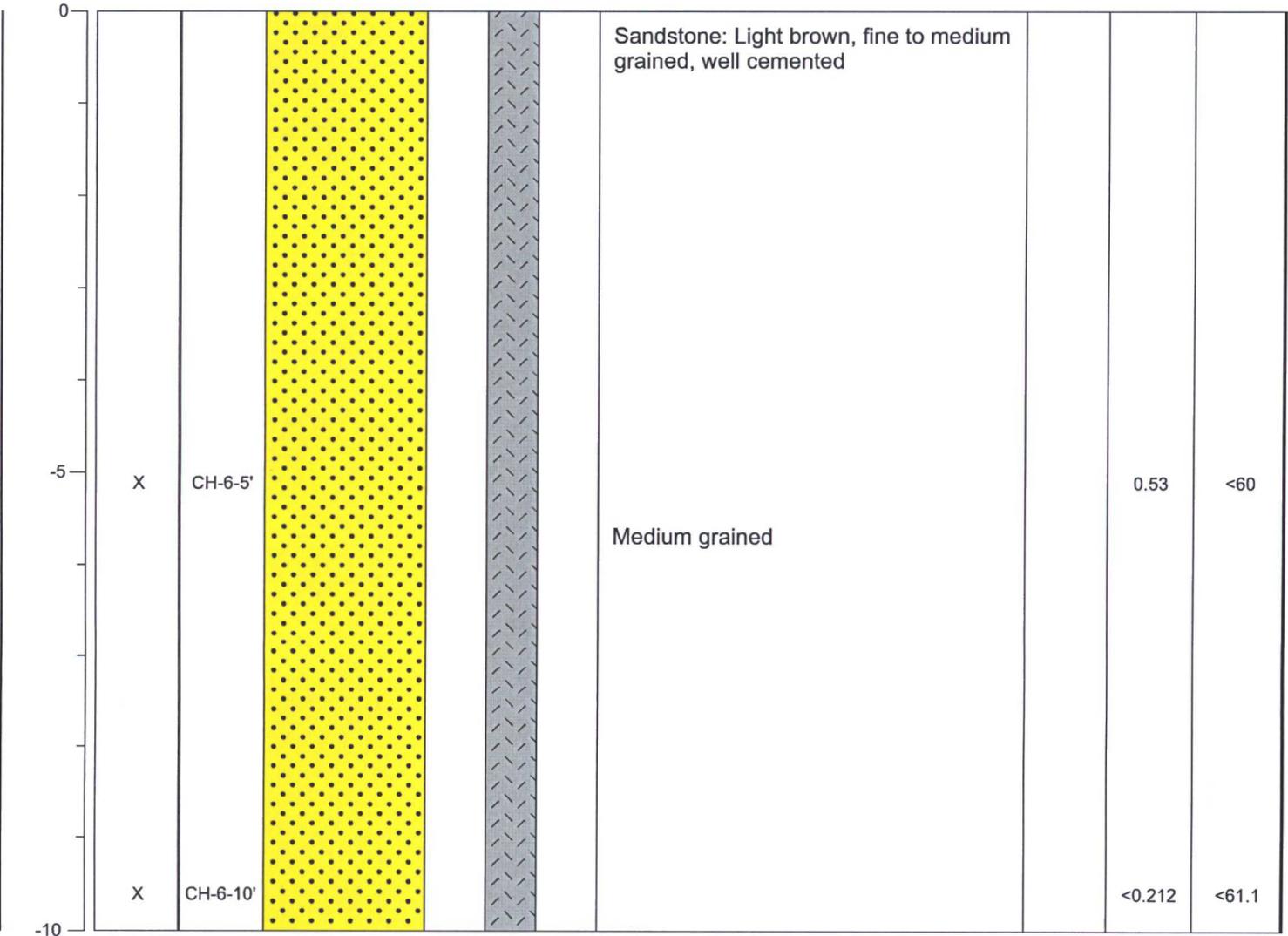
PROJECT NAME: San Juan 28-6 #155N	SOIL BORING NO: CH-5
LOCATION: Rio Arriba County, New Mexico	DRILL TYPE: Air Rotary
FIELD LOGGED BY: Cale Kanack	CME-850
SURFACE ELEVATION (msl): Unavailable	BORE HOLE DIAMETER: 6"
GROUNDWATER ELEVATION (msl): N/A	DRILLED BY: Yellow Jacket Drilling
REMARKS: * Depths measured from bottom of existing excavation (approximately 19' below grade)	DATE/TIME HOLE STARTED: 4-22-16 / 1135
COORDINATES: Unavailable	DATE/TIME HOLE COMPLETED: 4-22-16 / 1330

DEPTH (bgs) - ft	SAMPLE TO LAB	SAMPLE ID	STRATAGRAPHIC SEQUENCE	COMPLETION INFORMATION	CLASSIFICATION AND DESCRIPTION	PID (ppm)	Total BTEX (mg/kg)	Total TPH (mg/kg)
------------------	---------------	-----------	------------------------	------------------------	--------------------------------	-----------	--------------------	-------------------



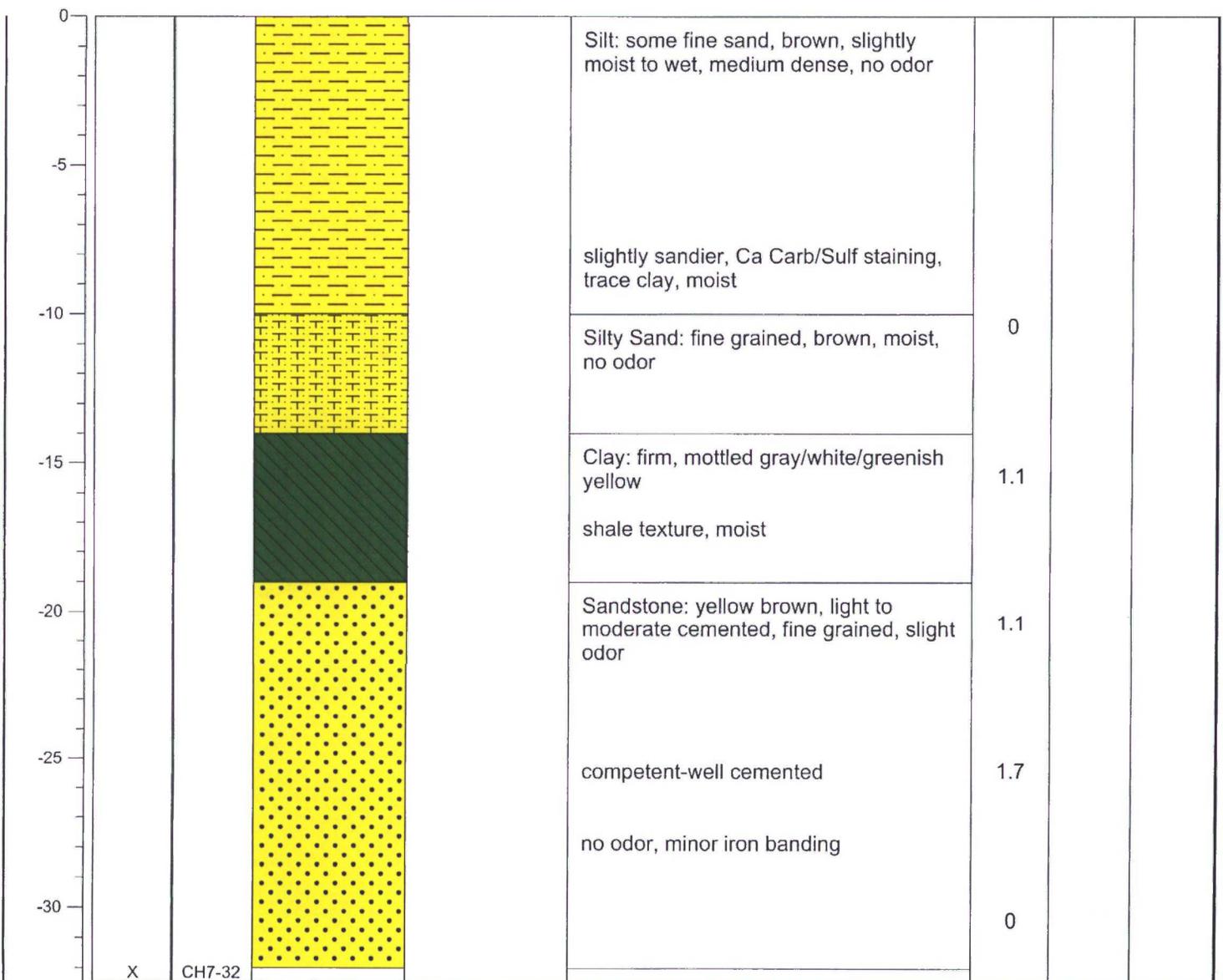
PROJECT NAME: <u>San Juan 28-6 #155N</u>	SOIL BORING NO: <u>CH-6</u>
LOCATION: <u>Rio Arriba County, New Mexico</u>	DRILL TYPE: <u>Air Rotary</u>
FIELD LOGGED BY: <u>Cale Kanack</u>	<u>CME-850</u>
SURFACE ELEVATION (msl): <u>Unavailable</u>	BORE HOLE DIAMETER: <u>6"</u>
GROUNDWATER ELEVATION (msl): <u>N/A</u>	DRILLED BY: <u>Yellow Jacket Drilling</u>
REMARKS: <u>* Depths measured from bottom of existing excavation (approximately 19' below grade)</u>	DATE/TIME HOLE STARTED: <u>4-22-16 / 1420</u>
COORDINATES: <u>Unavailable</u>	DATE/TIME HOLE COMPLETED: <u>4-22-16 / 1530</u>

DEPTH (bgs) - ft	SAMPLE TO LAB	SAMPLE ID	STRATAGRAPHIC SEQUENCE	COMPLETION INFORMATION	CLASSIFICATION AND DESCRIPTION	PID (ppm)	Total BTEX (mg/kg)	Total TPH (mg/kg)
------------------	---------------	-----------	------------------------	------------------------	--------------------------------	-----------	--------------------	-------------------



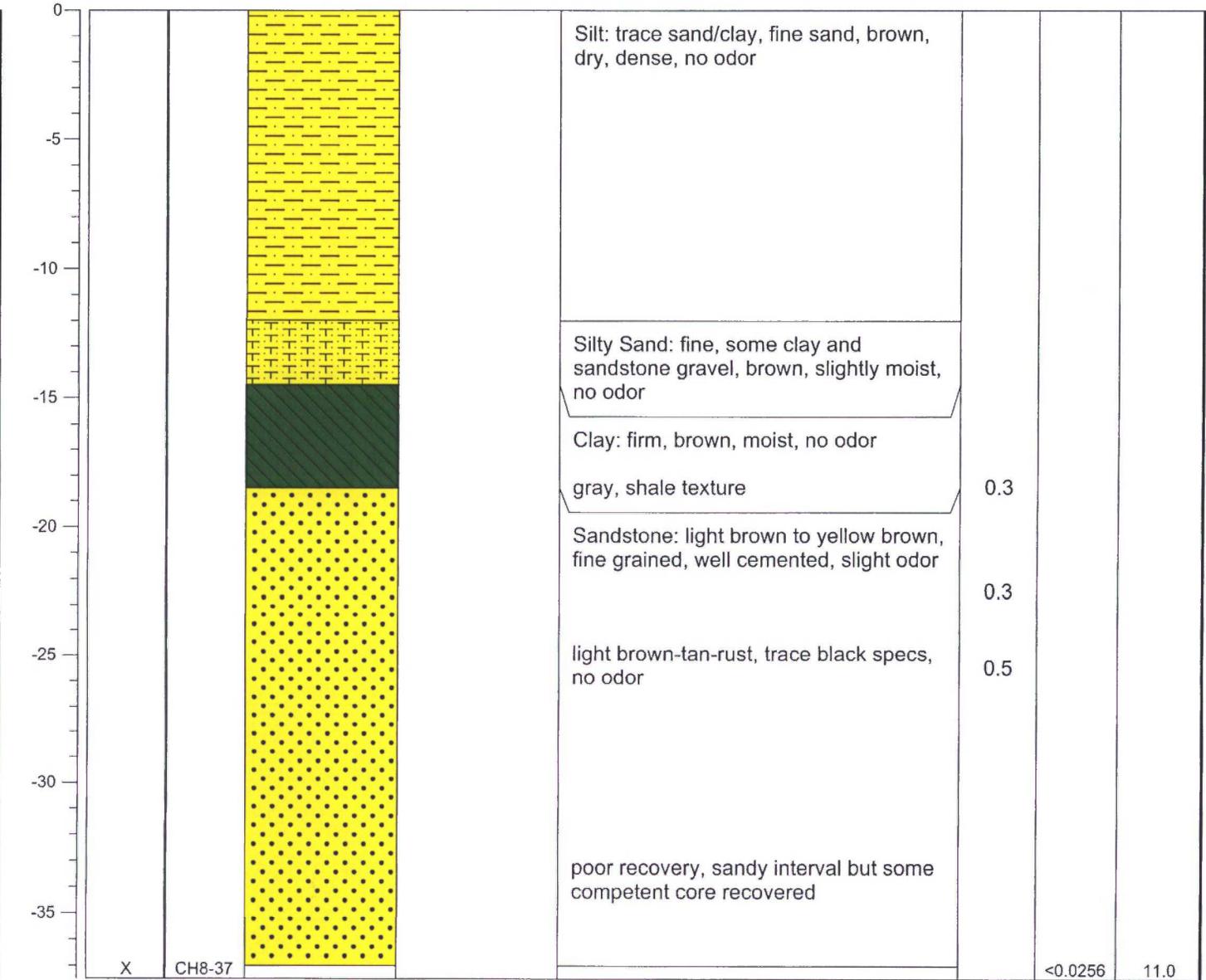
PROJECT NAME: <u>San Juan 28-6 #155N</u>	SOIL BORING NO: <u>CH-7</u>
LOCATION: <u>Rio Arriba, New Mexico</u>	DRILL TYPE: <u>Stratex/Air Rotary</u>
FIELD LOGGED BY: <u>Jeff Walker</u>	<u>CME-85</u>
SURFACE ELEVATION (msl): _____	BORE HOLE DIAMETER: _____
GROUNDWATER ELEVATION (msl): <u>N/A</u>	DRILLED BY: <u>Yellow Jacket Drilling</u>
REMARKS: _____	DATE/TIME HOLE STARTED: <u>6/28/2016</u>
COORDINATES: <u>36.63294, -107.48142</u>	DATE/TIME HOLE COMPLETED: <u>7/6/2016 at 0800</u>

DEPTH (bgs) - ft	SAMPLE TO LAB	SAMPLE ID	STRATAGRAPHIC SEQUENCE	COMPLETION INFORMATION	CLASSIFICATION AND DESCRIPTION	PID (ppm)	Total BTEX (mg/kg)	Total TPH (mg/kg)
------------------	---------------	-----------	------------------------	------------------------	--------------------------------	-----------	--------------------	-------------------



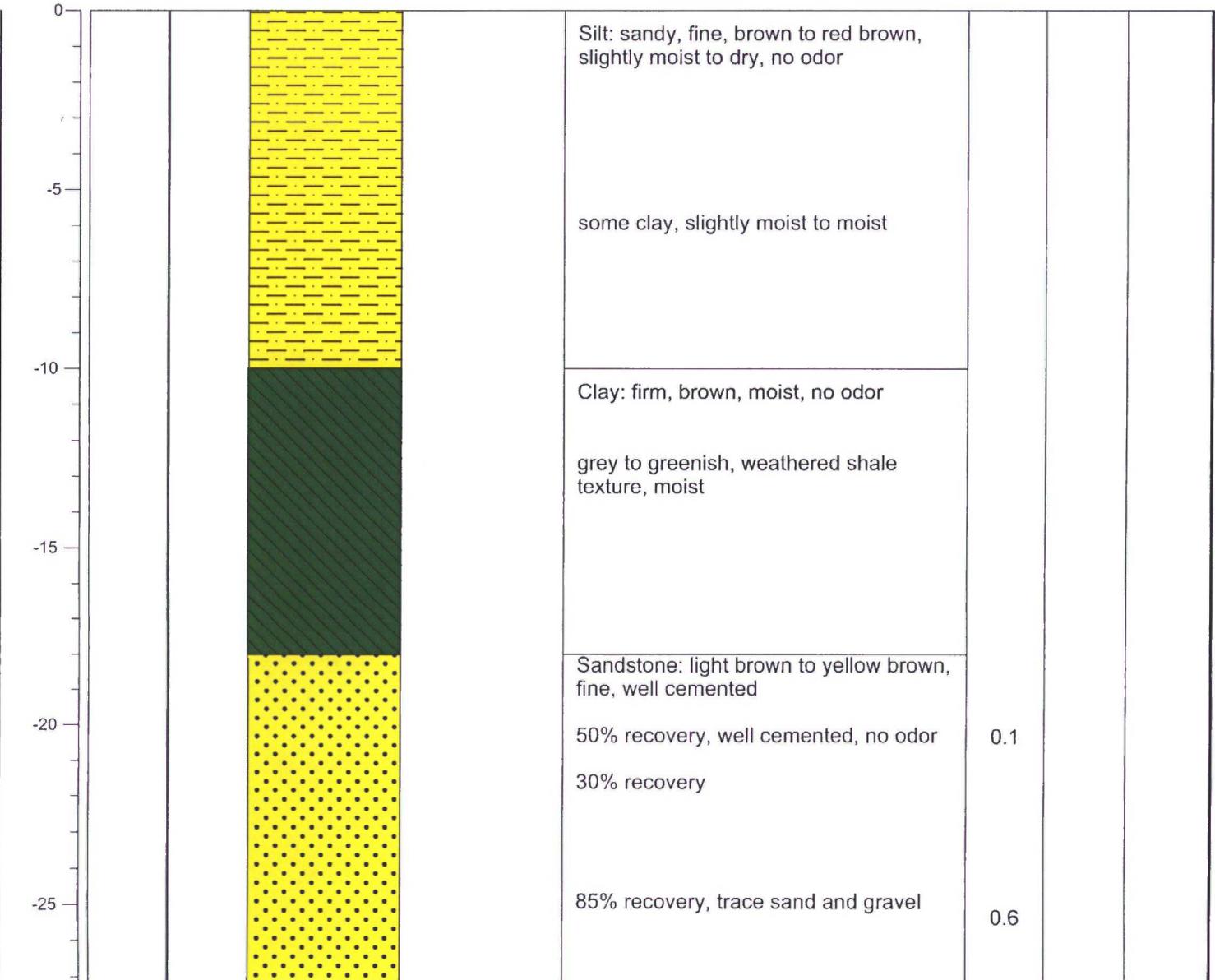
PROJECT NAME: <u>San Juan 28-6 #155N</u>	SOIL BORING NO: <u>CH-8</u>
LOCATION: <u>Rio Arriba, New Mexico</u>	DRILL TYPE: <u>Stratex/Air Rotary</u>
FIELD LOGGED BY: <u>Jeff Walker</u>	<u>CME-85</u>
SURFACE ELEVATION (msl): <u>No survey data available</u>	BORE HOLE DIAMETER: _____
GROUNDWATER ELEVATION (msl): _____	DRILLED BY: <u>Yellow Jacket Drilling</u>
REMARKS: _____	DATE/TIME HOLE STARTED: <u>7/6/2016 at 930</u>
COORDINATES: <u>36.63298, -107.48141</u>	DATE/TIME HOLE COMPLETED: _____

DEPTH (bgs) - ft	SAMPLE TO LAB	SAMPLE ID	STRATAGRAPHIC SEQUENCE	COMPLETION INFORMATION	CLASSIFICATION AND DESCRIPTION	PID (ppm)	Total BTEX (mg/kg)	Total TPH (mg/kg)
------------------	---------------	-----------	------------------------	------------------------	--------------------------------	-----------	--------------------	-------------------



PROJECT NAME: San Juan 28-6 #155N	SOIL BORING NO: CH-9
LOCATION: Rio Arriba, New Mexico	DRILL TYPE: Stratex/ Air Rotary
FIELD LOGGED BY: Jeff Walker	CME-85
SURFACE ELEVATION (msl): No survey data available	BORE HOLE DIAMETER: _____
GROUNDWATER ELEVATION (msl): _____	DRILLED BY: Yellow Jacket Drilling
REMARKS: _____	DATE/TIME HOLE STARTED: 7/6/2016 @ 1425
COORDINATES: 36.63301, -107.48151	DATE/TIME HOLE COMPLETED: 7/16/2016 @ 1630

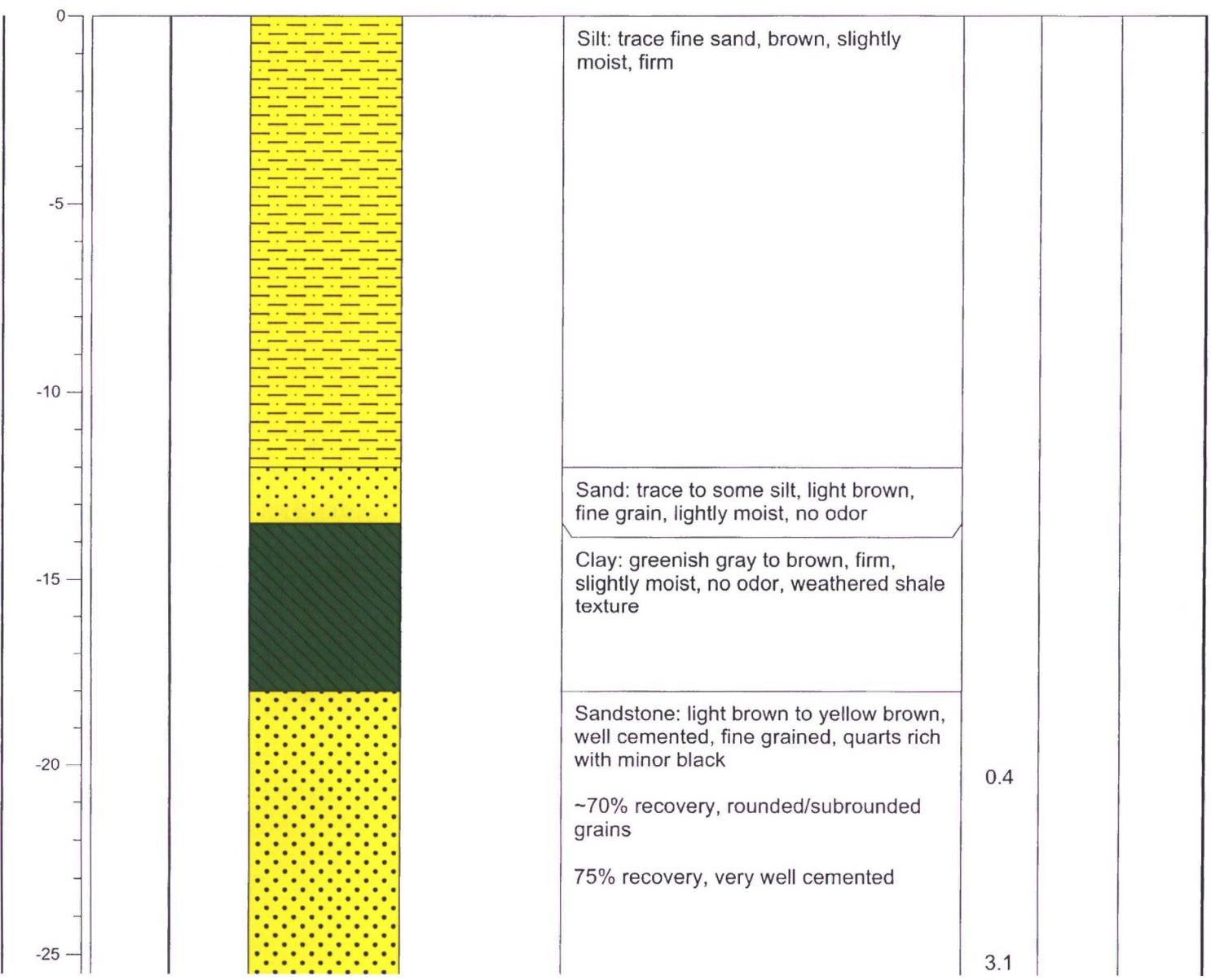
DEPTH (bgs) - ft	SAMPLE TO LAB	SAMPLE ID	STRATAGRAPHIC SEQUENCE	COMPLETION INFORMATION	CLASSIFICATION AND DESCRIPTION	PID (ppm)	Total BTEX (mg/kg)	Total TPH (mg/kg)
------------------	---------------	-----------	------------------------	------------------------	--------------------------------	-----------	--------------------	-------------------



PROJECT NAME: San Juan 28-6 #155N  
 LOCATION: Rio Arriba, New Mexico  
 FIELD LOGGED BY: Jeff Walker  
 SURFACE ELEVATION (msl): No survey data available  
 GROUNDWATER ELEVATION (msl):  
 REMARKS:  
 COORDINATES: 36.63297, -107.48130

SOIL BORING NO: CH-10  
 DRILL TYPE: Stratex/Air Rotary  
 CME-85  
 BORE HOLE DIAMETER:  
 DRILLED BY: Yellow Jacket Drilling  
 DATE/TIME HOLE STARTED: 7/7/2016 @ 0630  
 DATE/TIME HOLE COMPLETED:

DEPTH (bgs) - ft	SAMPLE TO LAB	SAMPLE ID	STRATAGRAPHIC SEQUENCE	COMPLETION INFORMATION	CLASSIFICATION AND DESCRIPTION	PID (ppm)	Total BTEX (mg/kg)	Total TPH (mg/kg)
------------------	---------------	-----------	------------------------	------------------------	--------------------------------	-----------	--------------------	-------------------



TD = 42.5 feet bgs



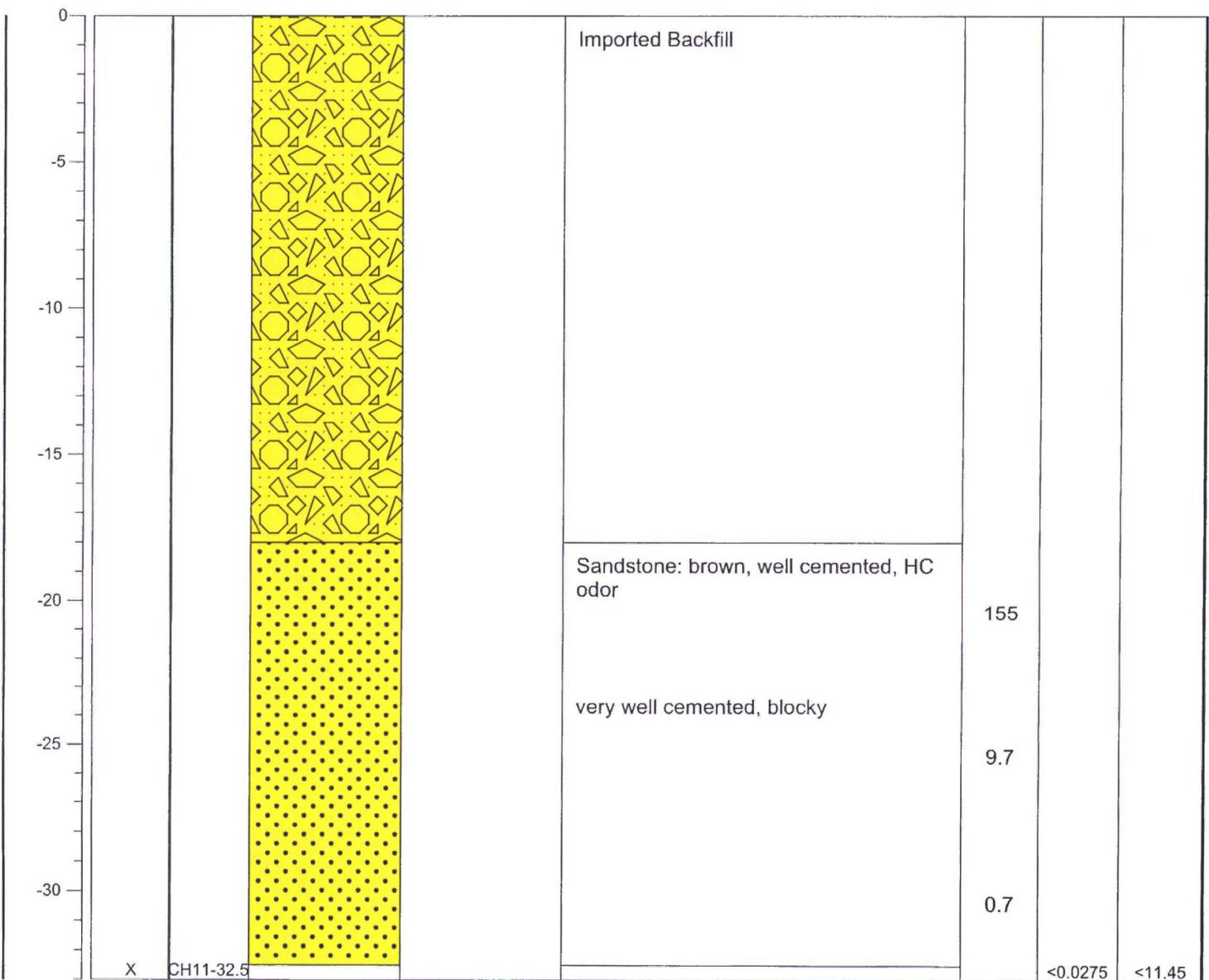
Services Inc.

BORING LOG AND WELL COMPLETION FORM

page 1 of 2

PROJECT NAME: San Juan 28-6 #155N	SOIL BORING NO: CH-11
LOCATION: Rio Arriba, New Mexico	DRILL TYPE: Stratex/Air Rotary
FIELD LOGGED BY: Jeff Walker	CME-85
SURFACE ELEVATION (msl): No survey data available	BORE HOLE DIAMETER: _____
GROUNDWATER ELEVATION (msl): _____	DRILLED BY: Yellow Jacket Drilling
REMARKS: _____	DATE/TIME HOLE STARTED: 7/7/2016 @ 930
COORDINATES: _____	DATE/TIME HOLE COMPLETED: _____

DEPTH (bgs) - ft	SAMPLE TO LAB	SAMPLE ID	STRATAGRAPHIC SEQUENCE	COMPLETION INFORMATION	CLASSIFICATION AND DESCRIPTION	PID (ppm)	Total BTEX (mg/kg)	Total TPH (mg/kg)
------------------	---------------	-----------	------------------------	------------------------	--------------------------------	-----------	--------------------	-------------------



TD = 32.5 feet bgs



Services Inc.

**BORING LOG AND  
WELL COMPLETION FORM**

page 1 of 1

PROJECT NAME: San Juan 28-6 #155N	SOIL BORING NO: CH-10
LOCATION: Rio Arriba, New Mexico	DRILL TYPE: Stratex/Air Rotary
FIELD LOGGED BY: Jeff Walker	CME-85
SURFACE ELEVATION (msl): No survey data available	BORE HOLE DIAMETER:
GROUNDWATER ELEVATION (msl):	DRILLED BY: Yellow Jacket Drilling
REMARKS:	DATE/TIME HOLE STARTED: 7/7/2016 @ 0630
COORDINATES: 36.63297, -107.48130	DATE/TIME HOLE COMPLETED:

DEPTH (bgs) - ft	SAMPLE TO LAB	SAMPLE ID	STRATAGRAPHIC SEQUENCE	COMPLETION INFORMATION	CLASSIFICATION AND DESCRIPTION	PID (ppm)	Total BTEX (mg/kg)	Total TPH (mg/kg)
------------------	---------------	-----------	------------------------	------------------------	--------------------------------	-----------	--------------------	-------------------

-30					50% recovery, core not as massive, less cemented	0.8		
-35					50% recovery, tan to rust, iron banding	0.4		
-40						0.3		
	X	CH10-42.5					0.017	<12.2

PROJECT NAME: San Juan 28-6 #155N	SOIL BORING NO: CH-9
LOCATION: Rio Arriba, New Mexico	DRILL TYPE: Stratex/ Air Rotary
FIELD LOGGED BY: Jeff Walker	CME-85
SURFACE ELEVATION (msl): No survey data available	BORE HOLE DIAMETER:
GROUNDWATER ELEVATION (msl):	DRILLED BY: Yellow Jacket Drilling
REMARKS:	DATE/TIME HOLE STARTED: 7/6/2016 @ 1425
COORDINATES: 36.63301, -107.48151	DATE/TIME HOLE COMPLETED: 7/16/2016 @ 1630

DEPTH (bgs) - ft	SAMPLE TO LAB	SAMPLE ID	STRATAGRAPHIC SEQUENCE	COMPLETION INFORMATION	CLASSIFICATION AND DESCRIPTION	PID (ppm)	Total BTEX (mg/kg)	Total TPH (mg/kg)
------------------	---------------	-----------	------------------------	------------------------	--------------------------------	-----------	--------------------	-------------------

-30					tan to rust, some greenish, 80% recovery			
-35					less competent	0.5		
-40								
	X	CH9-32					0.017	<12.2



Pace Analytical Services, Inc.  
9608 Loiret Blvd.  
Lenexa, KS 66219  
(913)599-5665

July 18, 2016

Christine Mathews  
GHD Services, Inc.  
6212 Indian School Rd. NE St2  
Albuquerque, NM 87110

RE: Project: 11119528 COP SAN JUAN 28-6 UNI  
Pace Project No.: 60222998

Dear Christine Mathews:

Enclosed are the analytical results for sample(s) received by the laboratory on July 07, 2016. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Alice Flanagan  
alice.flanagan@pacelabs.com  
Project Manager

Enclosures

cc: Angela Bown, GHD Services, Inc,  
Jeffrey Walker, GHD Services, Inc



### REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, Inc..



Pace Analytical Services, Inc.  
9608 Loiret Blvd.  
Lenexa, KS 66219  
(913)599-5665

## CERTIFICATIONS

Project: 11119528 COP SAN JUAN 28-6 UNI  
Pace Project No.: 60222998

---

### Kansas Certification IDs

9608 Loiret Boulevard, Lenexa, KS 66219  
WY STR Certification #: 2456.01  
Arkansas Certification #: 15-016-0  
Illinois Certification #: 003097  
Iowa Certification #: 118  
Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055  
Nevada Certification #: KS000212008A  
Oklahoma Certification #: 9205/9935  
Texas Certification #: T104704407  
Utah Certification #: KS00021  
Kansas Field Laboratory Accreditation: # E-92587

---

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, Inc..



### SAMPLE SUMMARY

Project: 11119528 COP SAN JUAN 28-6 UNI  
Pace Project No.: 60222998

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60222998001	SL-11119528-070616-JW-B7-32	Solid	07/06/16 07:45	07/07/16 14:10
60222998002	SL-11119528-070616-JW-B8-37	Solid	07/06/16 13:00	07/07/16 14:10

### REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, Inc..



### SAMPLE ANALYTE COUNT

Project: 11119528 COP SAN JUAN 28-6 UNI  
Pace Project No.: 60222998

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60222998001	SL-11119528-070616-JW-B7-32	EPA 8015B	AJM	3
		TNRCC 1005	ACW	6
		EPA 8270 by SIM	NAW	18
		EPA 5035A/8260	TJT	8
		ASTM D2974	DWC	1
60222998002	SL-11119528-070616-JW-B8-37	EPA 8015B	AJM	3
		TNRCC 1005	ACW	6
		EPA 8270 by SIM	NAW	18
		EPA 5035A/8260	TJT	8
		ASTM D2974	DWC	1

### REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, Inc..

## PROJECT NARRATIVE

Project: 11119528 COP SAN JUAN 28-6 UNI  
Pace Project No.: 60222998

---

**Method:** EPA 8015B  
**Description:** 8015B Diesel Range Organics  
**Client:** GHD Services\_COP NM  
**Date:** July 18, 2016

### General Information:

2 samples were analyzed for EPA 8015B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

### Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

### Sample Preparation:

The samples were prepared in accordance with EPA 3546 with any exceptions noted below.

### Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

### Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

### Surrogates:

All surrogates were within QC limits with any exceptions noted below.

### Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

### Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

### Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

### Additional Comments:

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, Inc..

## PROJECT NARRATIVE

Project: 11119528 COP SAN JUAN 28-6 UNI  
Pace Project No.: 60222998

---

**Method:** TNRCC 1005  
**Description:** TNRCC 1005 TPH  
**Client:** GHD Services\_COP NM  
**Date:** July 18, 2016

**General Information:**

2 samples were analyzed for TNRCC 1005. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Sample Preparation:**

The samples were prepared in accordance with TNRCC 1005 with any exceptions noted below.

**Initial Calibrations (including MS Tune as applicable):**

All criteria were within method requirements with any exceptions noted below.

**Continuing Calibration:**

All criteria were within method requirements with any exceptions noted below.

**Surrogates:**

All surrogates were within QC limits with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

**Additional Comments:**

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, Inc..

## PROJECT NARRATIVE

Project: 11119528 COP SAN JUAN 28-6 UNI  
Pace Project No.: 60222998

---

**Method:** EPA 8270 by SIM  
**Description:** 8270 MSSV PAH by SIM  
**Client:** GHD Services\_COP NM  
**Date:** July 18, 2016

**General Information:**

2 samples were analyzed for EPA 8270 by SIM. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Sample Preparation:**

The samples were prepared in accordance with EPA 3546 with any exceptions noted below.

**Initial Calibrations (including MS Tune as applicable):**

All criteria were within method requirements with any exceptions noted below.

**Continuing Calibration:**

All criteria were within method requirements with any exceptions noted below.

**Internal Standards:**

All internal standards were within QC limits with any exceptions noted below.

**Surrogates:**

All surrogates were within QC limits with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

**Additional Comments:**

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, Inc..

## PROJECT NARRATIVE

Project: 11119528 COP SAN JUAN 28-6 UNI  
Pace Project No.: 60222998

---

**Method:** EPA 5035A/8260  
**Description:** 8260 MSV GRO and Oxygenates  
**Client:** GHD Services\_COP NM  
**Date:** July 18, 2016

### General Information:

2 samples were analyzed for EPA 5035A/8260. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

### Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

### Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

### Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

### Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

### Surrogates:

All surrogates were within QC limits with any exceptions noted below.

### Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

### Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

### Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

### Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, Inc..

### ANALYTICAL RESULTS

Project: 11119528 COP SAN JUAN 28-6 UNI  
Pace Project No.: 60222998

**Sample:** SL-11119528-070616-JW-B7-32    **Lab ID:** 60222998001    Collected: 07/06/16 07:45    Received: 07/07/16 14:10    Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8015B Diesel Range Organics</b>								
Analytical Method: EPA 8015B Preparation Method: EPA 3546								
TPH-DRO	11.8	mg/kg	10.1	1	07/14/16 00:00	07/17/16 21:02		
<b>Surrogates</b>								
n-Tetracosane (S)	97	%	49-133	1	07/14/16 00:00	07/17/16 21:02	646-31-1	
p-Terphenyl (S)	96	%	57-108	1	07/14/16 00:00	07/17/16 21:02	92-94-4	
<b>TNRCC 1005 TPH</b>								
Analytical Method: TNRCC 1005 Preparation Method: TNRCC 1005								
TPH (C06-C12)	ND	mg/kg	20.6	1	07/15/16 15:05	07/16/16 00:43		
TPH (>C12-C28)	ND	mg/kg	20.6	1	07/15/16 15:05	07/16/16 00:43		
TPH (>C28-C35)	ND	mg/kg	20.6	1	07/15/16 15:05	07/16/16 00:43		
TPH Total (C06-C35)	ND	mg/kg	20.6	1	07/15/16 15:05	07/16/16 00:43		
<b>Surrogates</b>								
o-Terphenyl (S)	98	%	70-130	1	07/15/16 15:05	07/16/16 00:43	84-15-1	
1-Chlorooctane (S)	97	%	70-130	1	07/15/16 15:05	07/16/16 00:43	3386-33-2	
<b>8270 MSSV PAH by SIM</b>								
Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
Acenaphthene	ND	ug/kg	3.4	1	07/14/16 00:00	07/15/16 17:31	83-32-9	
Acenaphthylene	ND	ug/kg	3.4	1	07/14/16 00:00	07/15/16 17:31	208-96-8	
Anthracene	ND	ug/kg	3.4	1	07/14/16 00:00	07/15/16 17:31	120-12-7	
Benzo(a)anthracene	ND	ug/kg	3.4	1	07/14/16 00:00	07/15/16 17:31	56-55-3	
Benzo(a)pyrene	ND	ug/kg	3.4	1	07/14/16 00:00	07/15/16 17:31	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	3.4	1	07/14/16 00:00	07/15/16 17:31	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	3.4	1	07/14/16 00:00	07/15/16 17:31	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	3.4	1	07/14/16 00:00	07/15/16 17:31	207-08-9	
Chrysene	ND	ug/kg	3.4	1	07/14/16 00:00	07/15/16 17:31	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	3.4	1	07/14/16 00:00	07/15/16 17:31	53-70-3	
Fluoranthene	ND	ug/kg	3.4	1	07/14/16 00:00	07/15/16 17:31	206-44-0	
Fluorene	ND	ug/kg	3.4	1	07/14/16 00:00	07/15/16 17:31	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	3.4	1	07/14/16 00:00	07/15/16 17:31	193-39-5	
Naphthalene	ND	ug/kg	3.4	1	07/14/16 00:00	07/15/16 17:31	91-20-3	
Phenanthrene	ND	ug/kg	3.4	1	07/14/16 00:00	07/15/16 17:31	85-01-8	
Pyrene	ND	ug/kg	3.4	1	07/14/16 00:00	07/15/16 17:31	129-00-0	
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	75	%	62-105	1	07/14/16 00:00	07/15/16 17:31	321-60-8	
Terphenyl-d14 (S)	91	%	61-123	1	07/14/16 00:00	07/15/16 17:31	1718-51-0	
<b>8260 MSV GRO and Oxygenates</b>								
Analytical Method: EPA 5035A/8260								
Benzene	ND	mg/kg	0.0052	1		07/12/16 13:24	71-43-2	
Ethylbenzene	ND	mg/kg	0.0052	1		07/12/16 13:24	100-41-4	
Toluene	ND	mg/kg	0.0052	1		07/12/16 13:24	108-88-3	
TPH-GRO	ND	mg/kg	0.52	1		07/12/16 13:24		
Xylene (Total)	ND	mg/kg	0.010	1		07/12/16 13:24	1330-20-7	
<b>Surrogates</b>								
Toluene-d8 (S)	100	%	80-120	1		07/12/16 13:24	2037-26-5	
4-Bromofluorobenzene (S)	94	%	81-117	1		07/12/16 13:24	460-00-4	
1,2-Dichloroethane-d4 (S)	103	%	83-120	1		07/12/16 13:24	17060-07-0	

### REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, Inc..



### ANALYTICAL RESULTS

Project: 11119528 COP SAN JUAN 28-6 UNI  
Pace Project No.: 60222998

Sample: SL-11119528-070616-JW-B7-32    Lab ID: 60222998001    Collected: 07/06/16 07:45    Received: 07/07/16 14:10    Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>Percent Moisture</b> Analytical Method: ASTM D2974								
Percent Moisture	3.9	%	0.50	1		07/15/16 00:00		

### REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, Inc..

### ANALYTICAL RESULTS

Project: 11119528 COP SAN JUAN 28-6 UNI  
Pace Project No.: 60222998

Sample: SL-11119528-070616-JW-B8-37 Lab ID: 60222998002 Collected: 07/06/16 13:00 Received: 07/07/16 14:10 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8015B Diesel Range Organics</b>								
Analytical Method: EPA 8015B Preparation Method: EPA 3546								
TPH-DRO	11.0	mg/kg	10.1	1	07/14/16 00:00	07/17/16 21:11		
<b>Surrogates</b>								
n-Tetracosane (S)	92	%	49-133	1	07/14/16 00:00	07/17/16 21:11	646-31-1	
p-Terphenyl (S)	93	%	57-108	1	07/14/16 00:00	07/17/16 21:11	92-94-4	
<b>TNRCC 1005 TPH</b>								
Analytical Method: TNRCC 1005 Preparation Method: TNRCC 1005								
TPH (C06-C12)	ND	mg/kg	20.0	1	07/15/16 15:05	07/16/16 01:25		
TPH (>C12-C28)	ND	mg/kg	20.0	1	07/15/16 15:05	07/16/16 01:25		
TPH (>C28-C35)	ND	mg/kg	20.0	1	07/15/16 15:05	07/16/16 01:25		
TPH Total (C06-C35)	ND	mg/kg	20.0	1	07/15/16 15:05	07/16/16 01:25		
<b>Surrogates</b>								
o-Terphenyl (S)	101	%	70-130	1	07/15/16 15:05	07/16/16 01:25	84-15-1	
1-Chlorooctane (S)	100	%	70-130	1	07/15/16 15:05	07/16/16 01:25	3386-33-2	
<b>8270 MSSV PAH by SIM</b>								
Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
Acenaphthene	ND	ug/kg	3.3	1	07/14/16 00:00	07/15/16 17:49	83-32-9	
Acenaphthylene	ND	ug/kg	3.3	1	07/14/16 00:00	07/15/16 17:49	208-96-8	
Anthracene	ND	ug/kg	3.3	1	07/14/16 00:00	07/15/16 17:49	120-12-7	
Benzo(a)anthracene	ND	ug/kg	3.3	1	07/14/16 00:00	07/15/16 17:49	56-55-3	
Benzo(a)pyrene	ND	ug/kg	3.3	1	07/14/16 00:00	07/15/16 17:49	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	3.3	1	07/14/16 00:00	07/15/16 17:49	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	3.3	1	07/14/16 00:00	07/15/16 17:49	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	3.3	1	07/14/16 00:00	07/15/16 17:49	207-08-9	
Chrysene	ND	ug/kg	3.3	1	07/14/16 00:00	07/15/16 17:49	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	3.3	1	07/14/16 00:00	07/15/16 17:49	53-70-3	
Fluoranthene	ND	ug/kg	3.3	1	07/14/16 00:00	07/15/16 17:49	206-44-0	
Fluorene	ND	ug/kg	3.3	1	07/14/16 00:00	07/15/16 17:49	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	3.3	1	07/14/16 00:00	07/15/16 17:49	193-39-5	
Naphthalene	ND	ug/kg	3.3	1	07/14/16 00:00	07/15/16 17:49	91-20-3	
Phenanthrene	ND	ug/kg	3.3	1	07/14/16 00:00	07/15/16 17:49	85-01-8	
Pyrene	ND	ug/kg	3.3	1	07/14/16 00:00	07/15/16 17:49	129-00-0	
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	75	%	62-105	1	07/14/16 00:00	07/15/16 17:49	321-60-8	
Terphenyl-d14 (S)	93	%	61-123	1	07/14/16 00:00	07/15/16 17:49	1718-51-0	
<b>8260 MSV GRO and Oxygenates</b>								
Analytical Method: EPA 5035A/8260								
Benzene	ND	mg/kg	0.0052	1		07/12/16 13:39	71-43-2	
Ethylbenzene	ND	mg/kg	0.0052	1		07/12/16 13:39	100-41-4	
Toluene	ND	mg/kg	0.0052	1		07/12/16 13:39	108-88-3	
TPH-GRO	ND	mg/kg	0.52	1		07/12/16 13:39		
Xylene (Total)	ND	mg/kg	0.010	1		07/12/16 13:39	1330-20-7	
<b>Surrogates</b>								
Toluene-d8 (S)	100	%	80-120	1		07/12/16 13:39	2037-26-5	
4-Bromofluorobenzene (S)	94	%	81-117	1		07/12/16 13:39	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%	83-120	1		07/12/16 13:39	17060-07-0	

### REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, Inc..



### ANALYTICAL RESULTS

Project: 11119528 COP SAN JUAN 28-6 UNI  
Pace Project No.: 60222998

Sample: SL-11119528-070616-JW-B8-37 Lab ID: 60222998002 Collected: 07/06/16 13:00 Received: 07/07/16 14:10 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>Percent Moisture</b>								
Analytical Method: ASTM D2974								
Percent Moisture	2.2	%	0.50	1		07/15/16 00:00		

### REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, Inc..

### QUALITY CONTROL DATA

Project: 11119528 COP SAN JUAN 28-6 UNI  
Pace Project No.: 60222998

QC Batch: 438162 Analysis Method: EPA 5035A/8260  
QC Batch Method: EPA 5035A/8260 Analysis Description: 8260 MSV GRO and Oxygenates  
Associated Lab Samples: 60222998001, 60222998002

METHOD BLANK: 1791988 Matrix: Solid  
Associated Lab Samples: 60222998001, 60222998002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	mg/kg	ND	0.0050	07/12/16 12:07	
Ethylbenzene	mg/kg	ND	0.0050	07/12/16 12:07	
Toluene	mg/kg	ND	0.0050	07/12/16 12:07	
TPH-GRO	mg/kg	ND	0.50	07/12/16 12:07	
Xylene (Total)	mg/kg	ND	0.010	07/12/16 12:07	
1,2-Dichloroethane-d4 (S)	%	101	83-120	07/12/16 12:07	
4-Bromofluorobenzene (S)	%	92	81-117	07/12/16 12:07	
Toluene-d8 (S)	%	101	80-120	07/12/16 12:07	

LABORATORY CONTROL SAMPLE: 1791989

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	mg/kg	.1	0.092	92	75-116	
Ethylbenzene	mg/kg	.1	0.089	89	72-116	
Toluene	mg/kg	.1	0.087	87	72-116	
TPH-GRO	mg/kg	4	4.2	105	76-128	
Xylene (Total)	mg/kg	.3	0.27	91	69-116	
1,2-Dichloroethane-d4 (S)	%			102	83-120	
4-Bromofluorobenzene (S)	%			105	81-117	
Toluene-d8 (S)	%			97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1791990 1791991

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual	
		60223055003 Result	Spike Conc.	Spike Conc.	MS Result						MSD Result
Benzene	mg/kg	ND	.11	.11	0.087	0.098	79	88	28-136	11	36
Ethylbenzene	mg/kg	ND	.11	.11	0.080	0.088	73	80	10-152	9	48
Toluene	mg/kg	ND	.11	.11	0.083	0.092	75	83	19-141	11	40
Xylene (Total)	mg/kg	ND	.33	.33	0.24	0.27	74	81	10-149	9	50
1,2-Dichloroethane-d4 (S)	%						100	100	83-120		
4-Bromofluorobenzene (S)	%						103	102	81-117		
Toluene-d8 (S)	%						99	99	80-120		38

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

### REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, Inc..

**QUALITY CONTROL DATA**

Project: 11119528 COP SAN JUAN 28-6 UNI  
Pace Project No.: 60222998

QC Batch: 438458 Analysis Method: EPA 8015B  
QC Batch Method: EPA 3546 Analysis Description: EPA 8015B  
Associated Lab Samples: 60222998001, 60222998002

METHOD BLANK: 1793208 Matrix: Solid  
Associated Lab Samples: 60222998001, 60222998002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
TPH-DRO	mg/kg	ND	9.9	07/17/16 20:46	
n-Tetracosane (S)	%	96	49-133	07/17/16 20:46	
p-Terphenyl (S)	%	97	57-108	07/17/16 20:46	

LABORATORY CONTROL SAMPLE: 1793209

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
TPH-DRO	mg/kg	81.9	80.3	98	77-122	
n-Tetracosane (S)	%			100	49-133	
p-Terphenyl (S)	%			100	57-108	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1793210 1793211

Parameter	Units	60223039001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
TPH-DRO	mg/kg	ND	90.9	87.8	104	119	106	127	44-138	14	71
n-Tetracosane (S)	%						106	101	49-133		58
p-Terphenyl (S)	%						103	94	57-108		56

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

**REPORT OF LABORATORY ANALYSIS**

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, Inc..

### QUALITY CONTROL DATA

Project: 11119528 COP SAN JUAN 28-6 UNI  
Pace Project No.: 60222998

QC Batch: 438459 Analysis Method: EPA 8270 by SIM  
QC Batch Method: EPA 3546 Analysis Description: 8270/3546 MSSV PAH by SIM  
Associated Lab Samples: 60222998001, 60222998002

METHOD BLANK: 1793214 Matrix: Solid  
Associated Lab Samples: 60222998001, 60222998002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Acenaphthene	ug/kg	ND	3.2	07/15/16 16:55	
Acenaphthylene	ug/kg	ND	3.2	07/15/16 16:55	
Anthracene	ug/kg	ND	3.2	07/15/16 16:55	
Benzo(a)anthracene	ug/kg	ND	3.2	07/15/16 16:55	
Benzo(a)pyrene	ug/kg	ND	3.2	07/15/16 16:55	
Benzo(b)fluoranthene	ug/kg	ND	3.2	07/15/16 16:55	
Benzo(g,h,i)perylene	ug/kg	ND	3.2	07/15/16 16:55	
Benzo(k)fluoranthene	ug/kg	ND	3.2	07/15/16 16:55	
Chrysene	ug/kg	ND	3.2	07/15/16 16:55	
Dibenz(a,h)anthracene	ug/kg	ND	3.2	07/15/16 16:55	
Fluoranthene	ug/kg	ND	3.2	07/15/16 16:55	
Fluorene	ug/kg	ND	3.2	07/15/16 16:55	
Indeno(1,2,3-cd)pyrene	ug/kg	ND	3.2	07/15/16 16:55	
Naphthalene	ug/kg	ND	3.2	07/15/16 16:55	
Phenanthrene	ug/kg	ND	3.2	07/15/16 16:55	
Pyrene	ug/kg	ND	3.2	07/15/16 16:55	
2-Fluorobiphenyl (S)	%	74	62-105	07/15/16 16:55	
Terphenyl-d14 (S)	%	89	61-123	07/15/16 16:55	

LABORATORY CONTROL SAMPLE: 1793215

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Acenaphthene	ug/kg	32.1	27.4	85	60-111	
Acenaphthylene	ug/kg	32.1	27.3	85	56-111	
Anthracene	ug/kg	32.1	26.1	81	52-115	
Benzo(a)anthracene	ug/kg	32.1	27.7	86	59-119	
Benzo(a)pyrene	ug/kg	32.1	27.1	84	49-119	
Benzo(b)fluoranthene	ug/kg	32.1	30.1	94	56-121	
Benzo(g,h,i)perylene	ug/kg	32.1	26.2	82	46-123	
Benzo(k)fluoranthene	ug/kg	32.1	29.0	90	59-116	
Chrysene	ug/kg	32.1	30.8	96	48-116	
Dibenz(a,h)anthracene	ug/kg	32.1	28.8	90	46-126	
Fluoranthene	ug/kg	32.1	27.0	84	58-118	
Fluorene	ug/kg	32.1	27.8	87	58-115	
Indeno(1,2,3-cd)pyrene	ug/kg	32.1	26.2	82	47-124	
Naphthalene	ug/kg	32.1	28.0	87	51-121	
Phenanthrene	ug/kg	32.1	27.1	84	60-110	
Pyrene	ug/kg	32.1	28.9	90	60-119	
2-Fluorobiphenyl (S)	%			79	62-105	
Terphenyl-d14 (S)	%			86	61-123	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

### REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, Inc..



**QUALITY CONTROL DATA**

Project: 11119528 COP SAN JUAN 28-6 UNI  
 Pace Project No.: 60222998

Parameter	Units	60223055003		1793216		1793217		% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result								
Acenaphthene	ug/kg	ND	35.6	36.9	28.8	30.3	81	82	36-127	5	51			
Acenaphthylene	ug/kg	ND	35.6	36.9	30.3	30.3	85	82	31-133	0	72			
Anthracene	ug/kg	ND	35.6	36.9	29.2	30.7	82	83	26-138	5	49			
Benzo(a)anthracene	ug/kg	ND	35.6	36.9	29.7	32.4	84	88	31-148	9	73			
Benzo(a)pyrene	ug/kg	ND	35.6	36.9	29.7	31.4	84	85	19-148	5	67			
Benzo(b)fluoranthene	ug/kg	ND	35.6	36.9	29.9	31.5	84	86	27-152	5	59			
Benzo(g,h,i)perylene	ug/kg	ND	35.6	36.9	29.7	30.5	83	83	10-153	2	73			
Benzo(k)fluoranthene	ug/kg	ND	35.6	36.9	30.0	31.3	84	85	10-157	4	61			
Chrysene	ug/kg	ND	35.6	36.9	33.7	34.6	95	94	10-154	3	73			
Dibenz(a,h)anthracene	ug/kg	ND	35.6	36.9	31.2	31.6	88	86	28-135	1	48			
Fluoranthene	ug/kg	ND	35.6	36.9	27.5	29.9	77	81	10-169	8	77			
Fluorene	ug/kg	ND	35.6	36.9	30.0	31.1	84	84	19-148	3	54			
Indeno(1,2,3-cd)pyrene	ug/kg	ND	35.6	36.9	30.4	29.7	85	81	21-142	2	58			
Naphthalene	ug/kg	ND	35.6	36.9	30.0	31.1	84	84	10-175	4	66			
Phenanthrene	ug/kg	ND	35.6	36.9	30.1	31.6	84	86	10-201	5	91			
Pyrene	ug/kg	ND	35.6	36.9	33.2	35.9	93	97	10-206	8	74			
2-Fluorobiphenyl (S)	%						81	81	62-105		43			
Terphenyl-d14 (S)	%						94	97	61-123		46			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

**REPORT OF LABORATORY ANALYSIS**

This report shall not be reproduced, except in full,  
 without the written consent of Pace Analytical Services, Inc..

### QUALITY CONTROL DATA

Project: 11119528 COP SAN JUAN 28-6 UNI  
Pace Project No.: 60222998

QC Batch: 438486 Analysis Method: TNRCC 1005  
QC Batch Method: TNRCC 1005 Analysis Description: TX1005 TPH GCS  
Associated Lab Samples: 60222998001, 60222998002

METHOD BLANK: 1793263 Matrix: Solid  
Associated Lab Samples: 60222998001, 60222998002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
TPH (>C12-C28)	mg/kg	ND	20.0	07/15/16 16:53	
TPH (>C28-C35)	mg/kg	ND	20.0	07/15/16 16:53	
TPH (C06-C12)	mg/kg	ND	20.0	07/15/16 16:53	
TPH Total (C06-C35)	mg/kg	ND	20.0	07/15/16 16:53	
1-Chlorooctane (S)	%	109	70-130	07/15/16 16:53	
o-Terphenyl (S)	%	110	70-130	07/15/16 16:53	

LABORATORY CONTROL SAMPLE & LCSD: 1793264 1793265

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
TPH Total (C06-C35)	mg/kg	2500	2180	1930	87	77	75-125	12	23	
1-Chlorooctane (S)	%				118	105	70-130			
o-Terphenyl (S)	%				104	91	70-130			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1793266 1793267

Parameter	Units	60223055003		MSD		MS		MSD		% Rec Limits	Max RPD	Qual
		Result	MS Spike Conc.	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec				
TPH Total (C06-C35)	mg/kg	ND	5570	5900	5630	5250	101	89	75-125	7	23	
1-Chlorooctane (S)	%						130	116	70-130			
o-Terphenyl (S)	%						109	96	70-130			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

### REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, Inc..



**QUALITY CONTROL DATA**

Project: 11119528 COP SAN JUAN 28-6 UNI  
 Pace Project No.: 60222998

QC Batch: 438647 Analysis Method: ASTM D2974  
 QC Batch Method: ASTM D2974 Analysis Description: Dry Weight/Percent Moisture  
 Associated Lab Samples: 60222998001, 60222998002

METHOD BLANK: 1794213 Matrix: Solid  
 Associated Lab Samples: 60222998001, 60222998002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Percent Moisture	%	ND	0.50	07/15/16 00:00	

SAMPLE DUPLICATE: 1794214

Parameter	Units	60222660001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	4.8	5.2	7	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

**REPORT OF LABORATORY ANALYSIS**

This report shall not be reproduced, except in full,  
 without the written consent of Pace Analytical Services, Inc..

## QUALIFIERS

Project: 11119528 COP SAN JUAN 28-6 UNI

Pace Project No.: 60222998

---

### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, Inc..

**QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Project: 11119528 COP SAN JUAN 28-6 UNI  
Pace Project No.: 60222998

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60222998001	SL-11119528-070616-JW-B7-32	EPA 3546	438458	EPA 8015B	438755
60222998002	SL-11119528-070616-JW-B8-37	EPA 3546	438458	EPA 8015B	438755
60222998001	SL-11119528-070616-JW-B7-32	TNRCC 1005	438486	TNRCC 1005	438823
60222998002	SL-11119528-070616-JW-B8-37	TNRCC 1005	438486	TNRCC 1005	438823
60222998001	SL-11119528-070616-JW-B7-32	EPA 3546	438459	EPA 8270 by SIM	438757
60222998002	SL-11119528-070616-JW-B8-37	EPA 3546	438459	EPA 8270 by SIM	438757
60222998001	SL-11119528-070616-JW-B7-32	EPA 5035A/8260	438162		
60222998002	SL-11119528-070616-JW-B8-37	EPA 5035A/8260	438162		
60222998001	SL-11119528-070616-JW-B7-32	ASTM D2974	438647		
60222998002	SL-11119528-070616-JW-B8-37	ASTM D2974	438647		

**REPORT OF LABORATORY ANALYSIS**

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, Inc..



Sample Condition Upon Receipt  
ESI Tech Spec Client

WO#: 60222998



60222998

Client Name: GHD GP-NM

Courier: FedEx  UPS  VIA  Clay  PEX  ECI  Pace  Other  Client

Tracking #: 6703 1695 2844 Pace Shipping Label Used? Yes  No

Custody Seal on Cooler/Box Present: Yes  No  Seals intact: Yes  No

Packing Material: Bubble Wrap  Bubble Bags  Foam  None  Other

Thermometer Used: T-239 / T-262 Type of Ice: Wet Blue  None  Samples received on ice, cooling process has begun.

Cooler Temperature: 5.4

Temperature should be above freezing to 6°C

Date and initials of person examining contents: JAS 7/7/16 1505

Chain of Custody present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody filled out:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler name & signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples arrived within holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time analyses (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct containers used:	<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	9. Bulk soil samples received for 6260.
Pace containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	11.
Unpreserved 5035A soils frozen w/in 48hrs?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
Filtered volume received for dissolved tests?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.
Sample labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	14.
Includes date/time/ID/analyses	Matrix: <u>water</u>	15.
All containers needing preservation have been checked.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	17.
Exceptions: VOA, Coliform, O&G, WI-DRO (water)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	18.
Trip Blank present:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Initial when completed: <u>JAS</u> Lot # of added preservative:
Pace Trip Blank lot # (if purchased): <u>NA</u>		19. <u>no trip blank</u>
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	20.
Project sampled in USDA Regulated Area:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	21. List State: <u>NM</u>
Additional labels attached to 5035A vials in the field?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	22.

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: AAF Date: 07/07/16

Temp Log: Record start and finish times when unpacking cooler, if >20 min, recheck sample temps.	
Start: <u>1500</u>	Start:
End: <u>1505</u>	End:
Temp:	Temp:

